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AMERICAN INSTITUTE OF MINING ENGINEERS.

The next general meeting of the Institute will be held in Montreal, Canada, beginning Tuesday, September 16th.

A subsequent notice will give information concerning papers, excursions, railroad fares, etc. Members expecting to read papers at this meeting will please notify the Secretary promptly.

THOMAS M. DROWN, Secretary.

SECRETARY'S OFFICE, LAFAYETTE COLLEGE,
EASTON, PA., August 11, 1879.

MISSOURI ZINC ORES.

We copied, August 2d, from a Missouri exchange, a paragraph containing some items of news concerning the western zinc business, and also a gorgeous but visionary picture of the future of this business in Missouri. According to this prophecy, the Illinois zinc-works are to fail; immense works, immensely successful, are to be established in Missouri (it being better economy, according to this writer, to have the works at the ore-mines instead of the coal-mines); an enormous demand for sheet-zinc roofing is to arise, and slate, shingles, and sheet-iron are to be superseded; two or three new railroads will be required to transact the vast business involved; and finally, those who go in first will get the cream of the profits.

A Missouri correspondent writes, with indignant curiosity, to know how we could allow "such stuff" to pass inspection, and be quoted in our columns. "While the resources, discovered and undiscovered," says our correspondent, speaking of the Missouri zinc-deposits, "are certainly immense, people, even here, wonder that they find such crazy talk copied in the JOURNAL." We might ask our friend where he gets his certainty about the undiscovered part of the resources he mentions; but that would be to take advantage of a mere slip of the pen. What he means is, that the discoveries thus far show both the existence of large deposits and the probability that others will be found.

As to our publication of the paragraph in question, it was quoted as a matter of news; and the news of the portion which our correspondent condemns was, not that all the great things therein prophesied were going to happen, but that the Missouri editor said so! We might very well have added an editorial note, to explain that we did not agree with him; but we do not admit that we were bound to do so, or that we are to be held responsible for matter which we quote, even without comment. *

BODIE BUBBLES.

We are scarcely surprised at the consternation which our plain statement of the facts in the case of the Maryland Consolidated Mine produced among its unfortunate stockholders, and among those who were profiting by the sale of the stock at fancy prices. Having been engaged in mining all our lives, we know well that nothing is more injurious to a permanent interest in legitimate mining than the floating on the public of worthless or greatly overvalued stocks.

The managers of the Maryland Con., in their frantic effort to keep their bubble afloat, seem to have proved more than they intended. In endeavoring to refute our statement that, on the 16th of July, there were but two men underground at a time, they showed the reporter of the Bodie *Standard* their books, from which they stated that, during the month of July, they had 16 men steadily at work. Now, if the books show any such thing, it would be well to have them, as well as the mine, examined by some competent and independent expert. For it is quite susceptible of proof that the statement of the managers in this, as in the matter of the "four feet of gold-bearing quartz," is untrue.

We do not suppose that any one will now risk his money upon the "official" statements of any one connected with this enterprise; but we believe that those who did buy stock upon the misrepresentations that were made can recover their money by law. It would be a wholesome lesson to teach at this time.

The report has been circulated for the past ten days that the Mono has found rich ore, said to be the continuation of the Bodie bonanza or rich chimney on the 430 level. If rich ore has really been found, which is quite possible, the straightforward course of publishing the facts fully for the benefit of stockholders, should have been followed. The strike certainly is not a continuation of the Bodie bonanza. An examination of this, which is about 450 feet from the Mono line, would not lead one to expect its continuance into the Mono; and as the Bodie had not found rich pay in its lower levels in going south, the Mono strike may be important to both concerns.

The Dudley tunnel, which has been selling at $150,000 to $250,000, is another mine in which it would be difficult to show value for a small part of the price at which it is selling. The tunnel is 1400 feet long, and the shaft is down 300 or 350 feet. The tunnel proves pretty thoroughly this strip of ground, and at several points along it levels have been driven off in what are termed "veins," but which in reality are simply bands of soft porphyry similar in character to a band in the Bodie mine, in which one of the main levels has been driven alongside of a vein. This decomposed rock is very easily and cheaply worked, and it will almost anywhere give an "assay" of a few dollars, though it is nowhere rich enough to work. In the Dudley, work is now stopped on these levels, and to the question repeated in each, "What does this rock run?" there was the invariable stereotyped answer, "It gives assays from $2 to $40 a ton." There was but one place shown us in the mine where there was a quartz ledge, said to carry some fair ore, large enough to be worthy of much attention, and at that point it was apparently a local enlargement of the vein with the quartz crushed. The way in which it was "gophered" out showed in a moment, to any experienced eye, that it was not only a very unusual occurrence in the mine but a deposit limited in length.

There was a small quantity—possibly 50 to 100 tons—of ore on the dump; but there was no such quantity as might have been expected from a mine having the development of this. If, after that amount of exploration, no paying quantity of ore had been found, it would naturally be classed as a poor prospect, and should be valued accordingly, instead of at $200,000, as it has been quoted.

It may be taken for granted that no claim which has not proved pay ore in a regular ledge is worth any thing like $100,000; and there are plenty of Bodie prospects that have no ore whatever, and yet are quoted at even much more than this. Besides the question of actual value in sight in a mine, that of title is a very serious one, and very few of the Bodie mines have a United States patent—the only assurance of a good title. So long as a mine is "an assessment proposition"—to use a Western expression—there is never any question of title raised; but so soon as it shows any real value, if it has not secured a patent, it is generally found to have several claimants.

It is not our intention to go into details concerning each of the Bodie mines. Those interested in any of them should insist upon proper periodical official reports concerning them; and should have the mines examined from time to time by outside independent experts where there is reason to suspect the management of misrepresenting or concealing the true condition of affairs. Stockholders should not forget the fact that those interested in disposing of stocks will neglect no means to induce the public to believe them all to represent bonanzas. Few of the papers

that so freely advertise and laud any mine in which they are interested know any thing whatever about mines, as any one can perceive by perusing the utter trash they publish; and when to their ignorance of the subject is added an interest in encouraging a spirit of speculation and gambling in stocks, which they incorrectly term "promoting an interest in mining," the average stockholder can perceive how great need there is for circumspection in accepting the glowing reports so freely circulated.

Bodie is a good and promising camp. It possesses some mines of real value, and some good prospects; but many of the mines which are already more or less largely developed contain low-grade ores, too low to pay, at present cost of mining and milling. Though some of them may be able, with good mills, to make money on $15 or $20 ore, others lack both grade and quantity. Though they may be prospects that would justify the expenditure of money in developments, many of them have certainly no such value at present as those interested in selling Bodie stocks would have the dear public believe. If occasion calls for it, we may enter into greater detail concerning some of these mines; but the space at our command at present suggests a limit to this review.

We may repeat the axiom, that the value of a mine is to be measured by what it actually is, not by what extra-sanguine vendors or brokers imagine it may become.

VISIONARY THEORIES OF PRACTICAL MEN.

The trouble with many men who plume themselves on being "practical" experts in mining is, that they are not practical. They guess and have impressions and jump to conclusions where truly practical men would be cautious; and of all the wild theorizers in the world, they are the wildest.

Here is Mr. J. E. CLAYTON, for instance, with his "chimney and striation" theory—a theory which he announces as good for all true fissure-veins. When pressed for his facts, he talks about all the mines in the gold belt of California, and specifies very vaguely the mines on the Mother lode and in Grass Valley. Not one mine is named; not one spot is described, so that the observation can be repeated or verified; and it never seems to have entered Mr. CLAYTON'S head that, even if the facts he alleges were true for all the California gold mines, they would not justify him in a sweeping theory about fissure-veins in general; still less, in laying down a rule to guide the purchasers and explorers of undeveloped mines.

A truly practical man would infer from such facts that there might be a cause for the phenomena common to the mines in which the phenomena occur, and absent from the mines in which they do not occur. It is only a visionary theorist who thinks he has made a fundamental discovery in the formation of fissure-veins everywhere, when he has merely studied a limited and peculiar set of facts.

It suits the purposes of some of Mr. CLAYTON'S friends to dub him "the HUGH MILLER of American Geology," and to talk about his flannel shirt as part of his superiority to criticism. Mr. CLAYTON lends himself to this folly by parading himself as an "uneducated" engineer, and intimating that people who do not accept his theories are not practical. To such silly talk, we have a plain answer to give. Mr. CLAYTON is not uneducated. He has studied a good deal, and deserves much credit for his zeal and activity. But he is unpractical. Nobody has opposed his theory on theoretical grounds. We explained to what extent it harmonized with observed facts, advancing no theory ourselves, and resting both on our own experience, which we are quite willing to compare with Mr. CLAYTON'S, and on the experience of others, which is certainly, in the aggregate, very far superior to his.

It now appears that he adopted his theory nearly a quarter of a century ago, before he had all this experience, and that he has been holding it ever since. We need not say that this is not the practical way to generalize from facts. A man with a preconceived theory will take note of facts that support it; but he will be in danger of overlooking those which do not.

We have not questioned the accuracy of Mr. CLAYTON'S observations. Indeed, they can not well be questioned until he shall have stated them with that precision which practical men require. We can give him examples, in the California gold belt, of mines in which the chimneys and the striations do not coincide; and we can give him practical explanations of some of the cases in which they do coincide, which would limit his theory to the narrow range we have already granted to it. But we do not care to pursue the discussion with him, in the absence of any other sponsor for a theory which he has been preaching for more than twenty years without making converts.

He backs up this theory with another one, concerning the relation between eruptive rocks and metalliferous deposits. In support of this, he cites a number of geological observations, which are somewhat weakened by the circumstance that he includes among his eruptive rocks some species that are held by the best practical geologists to be sedimentary, and others of which the origin is disputed. But if all his observations were correct, they would not prove his proposition, nor touch the statement which we have made, and which he fancies he can thus assail, that the "great geological faults," involving large displacement of strata, have not been produced by eruptive agencies. That there is a connection between eruptive rocks and metalliferous deposits of some kinds, we have elsewhere explained, and have taught for many years. That it justifies Mr. CLAYTON in his confused conglomeration of forces and motions, we do not believe. But that is not the point of our present criticism upon him. We object rather to his buttressing one doubtful theory with another; and we do so because this theorizing is not practical.

Mr. CLAYTON'S most recent performance is an attack upon Dr. RAYMOND'S report on the property of the Little Pittsburg Consolidated Mining Co., at Leadville. He has never seen the locality, and he does not understand the report: two drawbacks which would seem serious to a practical man, but which do not prevent a theorist from going in to demonstrate that Dr. RAYMOND is "profoundly ignorant of the fundamental principles of mining geology." We will give a few samples of the manner in which this is made to appear.

Mr. CLAYTON is oh! so quite too awfully sarcastic upon Dr. RAYMOND for saying that the Leadville deposits are later in origin than the inclosing rocks. This, he says, is "remarkable," "startling in profundity," and he ironically hopes it will be clearly demonstrated, because "otherwise we should have the Leadville deposits, at some remote period, standing on nothing, with a 'glorious' disregard of gravity, until the inclosing rocks were built up around them." Such may be Mr. CLAYTON'S theoretical alternative; but there is a practical one which, in his soaring speculations, he has overlooked. The deposits might be later than the underlying, and earlier than the overlying, rocks; or, in other words, the porphyry might have overflowed an ore-bearing stratum. This view has been held by some; but Dr. RAYMOND does not share it, and hence his statement that the ore-deposits are later than both the foot-wall and the hanging-wall. Practically, therefore, it is Mr. J. E. CLAYTON who is left at *no* "remote period, standing on nothing."

After this preliminary flourish of the boomerang, Mr. CLAYTON proceeds to throw it in earnest. Dr. RAYMOND says there was a slipping, but "leaves us in doubt about the direction of the slipping, and does not even tell us if he observed striations on the walls." (Where one wall has been crushed, and the other wall eroded, isn't Mr. CLAYTON'S striation-mania a little unreasonable?) And Mr. C. is also left "in doubt as to the direction of the floor"—which is a great pity, seeing that a floor extends in all directions. And he is worried with mechanical difficulties about water-level and sea-level, all of which are sublimely hypothetical. Here is an ore-deposit, incontestably oxidized and carbonated from its original sulphureted condition. Only surface waters could produce this effect, for the practical reason that they alone carry pure oxygen. Hence, the present condition and distribution of the oxidized ores are to be ascribed to surface waters; and the appearance of both limestone and porphyry confirms this conclusion. But Mr. CLAYTON is perplexed and doubtful, because the altitude of the surface, and the water-level and the sea-level and a lot of other things, are not specified.

He wants to know, also, where was the "dumping-ground" of the waste materials, carried off by the erosion and solution of porphyry and limestone. This is, theoretically, a troublesome conundrum; but a practical man would know that the waste materials consist of alkaline silicates and calcic bicarbonates, carried away in solution, and of clay held in suspension and "dumped" in the vein itself and in the interstices of the hanging-wall. Practical geologists admit that the Mammoth Cave was excavated by water, though they have not found its dumping-ground, nor determined its former relations to sea-level.

Mr. CLAYTON proceeds to misunderstand, misrepresent, and, upon this basis, to satirize with somewhat feeble art, the processes of ore-deposition, etc., as described in Dr. RAYMOND'S report. It is sufficient to say that he does not comprehend the language of the report, and that this is not the fault of the language. Moreover, Dr. RAYMOND distinctly refers in that report to his earlier paper on the Eureka case, in which similar facts are still more fully discussed. Mr. CLAYTON'S alleged summary of the "order of events" omits some of the most important, and puts the rest in the wrong order. To his final triumphant question: "Will the Dr. take the pills he so freely offers to others?" we reply, in behalf of Dr. RAYMOND, that when the pills have been so chewed out of shape, it is too late to hand them back.

A flannel shirt does not necessarily make a man "practical," nor does a decent respect for the experience of others and a habit of studying the records of such experience in books prevent a man from being "practical." Mr. CLAYTON and his friends have taken pains to represent our criticisms upon his theories as proceeding from the "library," not the field. But they can not, by any such devices, disguise the issue. We have indulged in no grand theories, cited no books, assumed no abstractions, called in no mysterious forces, advanced no startling novelties. Dr. RAYMOND'S report on the Leadville mines is confined to an estimate of their money-value, with such an analysis of the nature and probable origin of the deposits as was

necessary to throw light on the legal title to the property, and the chances of the continuance of ore beyond the reserves already exposed. It is Mr. CLAYTON who professes to know about the forces that form veins, and move walls and deposit ore. It is he who has found what he calls Nature's law. It is he who wants to know the antediluvian dips and directions, and how the striations looked before they were rubbed off, and how high the mountains were before they became as high as they now are, and what became of the waste material, and how the cart could possibly have pulled the horse if the cart had been before the horse, and why the roof didn't fall, where it *did* fall, and how vast open spaces could have existed, where they did *not* exist, and whether Dr. RAYMOND will take pills, and a lot of such purely speculative questions. His flatterers may call him eloquent, sarcastic, sublime, even funny (the JOSEPH MILLER of American Geology, if they like); but they can not call him practical, while he is on exhibition in this attitude. The shirt may be real flannel; but it is too thin. *

PERSONALS.

"Superintendent," whose card will be found on page VI., is a competent and reliable engineer, who would be a valuable manager for any solid mining enterprise.

We will next week publish a cut showing the position and general dimensions of the "Bodie bonanza," or rich chimney, from which the Bodie dividend was earned, and to which stockholders are looking for future dividends. This illustration will give information of great value and interest.

If those interested in the stocks of Bodie bubbles or Bodie mines wish to have the present condition of their properties examined by a competent expert, arrangements can be made through this office with a gentleman in every way qualified, who is now in Nevada.

HOW BODIEITES VALUE MINES.—The Bodie *Standard*, of the 9th inst., referring to our preliminary notice of the Maryland Consolidated mine, says:

"Will the JOURNAL kindly inform the public the exact value of Maryland Consolidated stock? If it is 63 cents or 47 cents per share, we would like to know it. At the same time, we would like to know, if it is not trespassing too much upon the kindness of the JOURNAL man, how he arrives at such exact conclusions. The truth is, that the intrinsic value of a mine is a most difficult thing to decide. It may be $1 per share, or it may be $100 per share. Nothing but prospecting will determine it. It is the prospective and speculative value of a mine, and the supply and demand, which makes the price of the stock, and not newspaper opinion. If it were the latter, we would have been wealthy long ere this."

Our full *exposé* of the Maryland Consolidated bubble has already answered our contemporary's first and second questions. Does the *Standard* start out by putting the value of a good mine on every prospect-hole, and then taper down from that as the prospecting shows the hole finds nothing of value? We believe it should start on the value of what it has—a mere prospect-hole—and taper in accordance with what value is actually found—not with the complaisant puffing of local newspapers, much less with the deliberate misstatements of interested parties.

Bullion has a partiality for conundrums. It "wants to know, you know," what is the difference between a company declaring dividends when they have not been earned, and a company offering its stock to the public at more than the profit on, or net value of, the "ore in sight" in its mines. Let us see: In the one case, the managers are giving away what does not belong to them, doing what the law expressly forbids, and making themselves personally liable "to those whom it may concern." In the other case, they are putting their own valuation on their own property, and no one is obliged to buy if he thinks it too dear.

If, however, the conundrum be the difference to "purchasers of the stocks," why, it is easily solved. In one case, they get what they have no right to; and in the other, they "hardly ever" get what they have a right to, unless they wait a good while, and every thing is favorable, and the management honest—several very important "ifs."

If the point that *Bullion* wishes to make be, that no stock should be offered at more than the net profits on the "ore in sight," as estimated by competent experts, it is very doubtful if there be half a dozen stocks in this market that would stand the test, if, indeed, there be one, not excepting those which *Bullion* itself is interested in placing.

RESULTS WITH THE RHEOSTAT.—Researches on the effects of the rheostatic machine by M. Planté form the subject of a paper read before the *Académie des Sciences* on the 14th inst. Using a machine of 80 condensers charged by his secondary battery of 800 couples, he obtains noisy sparks more than 0·12m. long, and if they are produced above an insulating surface sprinkled with flowers of sulphur, they may even attain 0·15m., and leave a sinuous furrow. When short of their maximum length, they often form closed branches like *anastomoses;* also, on the sprinkled surface, *arborescences*, which appear after removing the excess of sulphur by a few light taps. This, M. Planté thinks, may explain the plant-like impressions sometimes found on the bodies of persons struck by lightning. But little dynamic electricity is required for these and other static effects described, that from 3 or 4 Daniell elements. By associating all the condensers in surface, and adding a small special rotating commutator, static effects of quantity are had, different from those of tension. By mechanical force of successive sparks, M. Planté elevates water.—*The Engineer, August 1st.*

COMSTOCK, TUSCARORA, AND EUREKA MINING NOTES.

Special Correspondence of the Engineering and Mining Journal.

Mr. Fair must have listened to some very "powerful" sermon on August 3d, to produce such a wonderful change in his tactics, regarding information to outside stockholders. Where there is repentance, there is hope. On the 8th inst., Mr. Fair, the mysterious hermit of the North End lower regions, allowed himself to be interviewed by an *Enterprise* reporter, and there he distributes a portion of the liberally-gathered points, acquired in the sweat of his face while in retreat. To sum the whole up: What every one knew to be a horse, on the 2200 level, Sierra Nevada, Mr. Fair calls a "quartzite porphyry horse slid down the foot-wall." What every one argued last month they might get—a narrow streak of ore on the west side of the horse on the Union 2300 level (Sierra Nevada 2200), Mr. Fair admits to be 8 inches wide, and therefore less than the mine was credited with. Mr. Fair continues: "We know there is ore below the horse." He might have spared himself the trouble; for I think hardly a man on this coast, who has paid any attention to the North End developments, doubts it. Mr. Fair does not, in the least, doubt that ore will be found all around the horse, nor do "his sisters and his cousins and his aunts." Mr. Fair then very skillfully and artfully alludes to the Consolidated Virginia horse as 110 × 147 feet, and reminds the public that ore was found all around it. He takes his point very well; as every body hopes for another Consolidated Virginia bonanza there in the northern region, people must first get accustomed to horses. (I presume the next discourse will be on the particular kind of argentiferous food the quadruped needs for its sustenance. Result: Lower grade ore.) With the exception of the home geography of the horse, Mr. Fair tells nothing new in this interview. Certain parties tried to make a great deal of capital out of this verbose lecture, and hoped they could send them all along the line, a booming. But also, certain parties here at the bay know "Slippery Jim," and they also know that, whenever he opens his mouth to supply a liberal point, he has his own ax to grind; and so, as a general thing, they coppered his dictum. Then came the superintendent's letter of the 9th, telling that on the 2300 level, Sierra Nevada, a drill-hole had been run 75 feet from the base of the incline, which has been very satisfactory, showing about 60 feet of fair-grade ore. A second hole run to the north and west from the 2300 station, a distance of 90 feet, shows, for the last ten feet, ore of fair value, and considerable water. He continues, saying they stopped further boring for fear of water, of which they had at present all they could handle.

The Union letter tells us they have run from their 2400 (Sierra Nevada 2300) a drill-hole in a southwesterly direction for 205 feet, passing through good ore, except 16 feet.

Now, then, this is just as evasive and slippery a statement as Mr. Fair's statement. No angle is given under which the hole was run, nor are they very exact as to starting-point. That would not do. Then, you know, parties can plot that into the maps which they keep up privately. Then, what is fair-grade ore? Is it ore which pays for milling, and not for mining, in contradistinction to good ore, which pays for both? One can see the little joker out of the pack. The hole in Union ground is run diagonally through the ore-body to make it appear the longest; but, starting at the incline, at least sixty feet of this diagonal bore belongs to Sierra Nevada ground, which has to go off from the length, besides the 16 feet (at that point where the drill cut it) of porphyry and low grade. You see the horse is kicking yet. For all we know, another hole might multiply the 16 by 2. As might be expected, a strong inside effort was made to brace them up; but, somehow, the aspect of "Jim preaching the gospel" is too novel yet to inspire full confidence.

Outsiders are just as anxious to sell as insiders, knowing full well that the mines are highly over-quoted, and that future developments are already highly discounted, and feeling chagrined that the green New Yorker won't step in and relieve them a little. The official mill result of the first 1800 tons Sierra Nevada ore is $61 per ton. This being rich ore, people can put their own construction on good and fair ore.

Ophir is at present in interesting formation, which the word "kindly" best denotes. The 2000 level west cross-cut will prospect the upper country, and, as soon as they are ready to prospect "west" from the foot of their incline, we shall see whether the formation shows any thing substantial. If any ore-body is found, it lies west. People here are looking to Ophir for some excitement. If talking of real merit, however, every thing so far known, and a good deal to be known, is already discounted. Still, should Dame Ophir get excited, dancing may be the result. Ophir's bullion product since milling commenced in December, 1878, up to July, 1879, inclusive, is $901,107.35, of which $401,651.66 was gold. How much of that is on hand, is a matter of conjecture.

People here, as a general thing, are dreadfully sanguine, and many see a continuous bonanza from Utah to Yellow Jacket; but it is all in their eye.

The North End is greatly troubled with water, and will be more so. Until the pipe connections with the Sutro Tunnel are made, they can not do any thing on the lower levels but run diamond-drill holes, and keep the ores and information to themselves. It makes one smile to see their game. It must, however, be gratifying to Mr. Sutro that the Comstock has not turned out the dry fissure which the Comstock superintendents tried to make her out a few years ago, backed by the learned Government Commission. At that time, Sutro was denounced as a humbug, and his tunnel refused as a gift. I notice now, they can not live without it, and California and Consolidated Virginia paid for last July the first tribute of $8500 to the Tunnel Company for ores hoisted.

Alta's gas has blown over; North Bonanza, as ever, ready to strike ore; and Mexican is the dead figurehead it has been so long, belonging to the class of parasites living off the divers surrounding "Comstock Giant Kelps." To your Leviathan men I give the slang advice, "Don't touch her with a ten-foot pole.

The Scorpion Company has made arrangements to have a big shaft sunk. The shaft site lies about 3000 feet east of the Sierra Nevada shaft, and about the same distance northeast from the Union shaft (and about on the Utah-Sierra Nevada dividing-line). This shaft will have four compartments—two hoisting compartments, each four feet nine inches by five feet six inches; sinking compartment, four feet by six feet six inches; pump compartment, six feet six inches by three feet four inches. The hoisting-engine used in sinking the Union (formerly North Consolidated

Virginia) shaft will be brought to the Scorpion site, to take the place of the present bucket and windlass. Some people may think it advantageous to again revive the ridiculous report of Scorpion owning the Sierra Nevada ore-body. This is not so. Sierra Nevada can follow the vein on its dip beyond her side-lines as far as she chooses, according to United States law, and it does not matter whether the ore lies under Scorpion ground or in China, as long as continuity of vein is proven. Such, Sierra Nevada can do. Scorpion, before it could do any thing, would have to sink its shaft, and trace, besides, continuity of vein to different croppings, under which Sierra Nevada claims. The main object in such rumors is, for the outside to furnish the money to sink the shaft with. If this shaft is ever sunk to several thousand feet depth, its future can only be that of the present Union shaft: to be sunk by assessments out of the public pockets for a period of two or three years, and then to be sold to the Utah and Sierra Nevada companies as a hoisting-shaft. As such, with the North Consolidated Virginia shaft fresh in their memories, let the insiders pay their own assessments and keep their stock, and make money out of themselves by the stock manipulations.

Prospects in Tuscarora are of late more favorable, so to speak, in general. In the Grand Prize, on the 500-foot level, is a known good ore-body of good milling ore—say 400 to 600 tons taken from it already. The interesting point at present is the 600 level, on which they must be about, or very soon, cutting into the ledge. They are changing these shifts nearly every day, to let as little leak out as possible. You see the Grayson controlling party is up to Comstock tricks.

Independence, at present paying dividends of 25 cents, may keep them up to the annual meeting in September; but small fluctuations are looked for until then. I have an impression New Yorkers carry a pretty heavy load of that stock. They ought to unite for a good management, as the impression is, that the mine can be made a permanently good one, if not run in the interest of stock-jobbers. It owns half of a ten-stamp mill, has two sets of hoisting machinery, though not of prime quality, and too small for any extensive work. If honestly managed, it ought not to be assessed.

Belle Isle has a large body on the 70 to 150-foot levels, enough to keep the Grand Prize 20-mill running up to or into October. The 250 level shows nothing anywhere. As such, the mine can only be called a handsome prospect. At prices now ruling, it is too high, and parties had better leave it alone. Though excitement may run it higher, I look for a down grade. Since the first, its milling facility has been reduced, and probably the next Tuscarora see-saw will be a stopping of milling altogether, and putting something else on the *tapis*. Such, you know, is the practice of the Tuscarora crowd.

Belle Isle North, originally the Hornet, has some merit. It has a chance to strike the Belle Isle ledge. It has a regular 1500-foot claim and is controlled by the Grayson party. Its trouble is water. They have a small hoisting-engine, about 300 feet of well-timbered shaft, and 400 feet of drifts. The character of the controlling party leads me to think that the chances are that it will double before long; at 50 cents per share now.

The Argenta is now building a ten-stamp mill which will soon be finished, and when crushing regularly, will probably make a splutter—in fact, is likely to—and rise above its present value of a dollar.

Navajo, De Frees, Silver Prize, etc., small fry; leave them entirely alone; they only pay insiders.

Northern Belle around here is considered pretty well worked out; so outside rumor has it. It is, as a rule, the case, the less merit in a mine, the further from home you go. See Leviathan.

In Eureka Consolidated, they are still fighting the water, trying to get to their 1300 level; may be lower. They have uncovered no new ore-bodies lately, and are at present working the edges of the existing chambers, which have panned out better than anticipated. They have run on this since they were flooded. The present coal-burners' strike is putting things in an awkward position, and unless satisfactory arrangements are made very soon, Eureka Consolidated will probably shut down its furnaces and limit itself to dead-work for a while, and probably sink a new shaft.

Richmond's policy seems to be to stop running ore, shut down furnaces, and do dead-work or exploring work. Richmond has about 14,000 gallons water per diem. Whether this policy will be pursued or not, we shall know by September 10th, its semi-annual. If both companies adopt this plan, it will make things dull in Eureka and hard on the men. For the quarter ending June 30th, Richmond reduced 985 tons, value $352,145.89, at a cost of $276,464.43; Eureka Consolidated reduced 15,414 tons, value $454,590.09, at a cost of $289,049.17; total district, reduced, 26,862 tons; value, $878,826.45; at a cost of $653,393.29. Clip.

SAN JUAN SILVER MINES.

Special Correspondence of the Engineering and Mining Journal.

Just now, new carbonate camps are all the go, and every week or so one hears of a new sensation which is attracting its hordes of prospectors and men of capital. The latest is an excitement on the east fork of the Rio Dolores, and which will be easily found on Prof. F. V. Hayden's drainage map of Colorado, marked in large letters, "Dolores Plateau," lat. 38°, long. 108° 30′.

As one may as well be out of the world as out of the fashion, I made preparations for a visit to the place, having for my companion on the trip Mr. Gus. Begole, the discoverer and former owner of the celebrated "Begole Mineral Farm" (now owned by the Norfolk (Va.) & Ouray Mining and Smelting Co.), and Mr. George E. Blake, our mail contractor between Ouray and Salina, Utah, and other routes through this region.

During the present year, there have been three distinct "rushes" to the Dolores. The first was in early spring before snow was gone; but those who went came back not by any means enthusiastic; and the first two excitements died a natural death. But this last has been created by the fact that 30 jack-loads of ore came on here from the Alma Mater mine, and 40 or 50 jack-loads went to Silverton; the former being reported to run 147 ounces, and the latter 300; and I hear now that Silverton and Howardsville are almost deserted, and that large numbers are leaving Leadville for the Dolores, owing to the favorable report made by Mr. Rische on his return to the former from the latter camp.

We took two pack animals with us, a horse and a mule, and loaded them with a two weeks' supply of grub—flour, ham, bacon, canned fruits, tea, and coffee—two frying-pans, a coffee-pot, tin cups, plates, knives and forks, tent, blankets, and prospecting-picks; and these, with a good mountain pony each, completed our outfit.

After an early breakfast at our cabin in Imogene Basin, we packed our animals and started to make the ascent of the range of mountains which heads the basin and intervenes between us and the San Miguel country. By eight o'clock A.M., we were looking down on our cabin from a height of 1000 feet above it; and by nine A.M., we were on the summit of the range, at an altitude of 12,700 feet above tide-water, and overlooking the beautiful valley of the San Miguel River, over 4000 feet below us. We reached the upper end of the San Miguel park or valley, by a very declivitous trail, by twelve o'clock, and took our "nooning" there, unsaddling our animals and letting them browse on the luxuriant bunch-grass, while we did ditto on some cold boiled ham and bread and chow-chow, with a pannikin of coffee to boot.

We are now in a gold country, and the placer diggings extend from here down the river for a distance of over fifteen miles. Up at the head of the different creeks which run into the head-waters of the San Miguel at this point are several rich and well-defined gold lodes and mines, the most noted of these being the Smuggler and Cimmarron, of which I will endeavor, ere long, to give you a description.

Pushing on down the valley, we passed through the little village of the lower San Miguel (altitude 8500), and three miles below it we turned to the left, and, crossing the river, went due south, following the left bank of the Lake Fork of the San Miguel River, through the most beautiful rolling mesa country I have ever seen—as far as the eye can reach vast meadows of luxuriant "bunch-grass," which, as we rode through it, reached almost to our saddle-girths, and waved in the breeze like fields of oats or barley. Toward sundown, we reached a grove of quaking-asp timber on a level plateau overlooking the river, with a rivulet close at hand and plenty of wood and good grass for our stock. So we went into camp here, close to where the Howard's Fork empties into the Lake Fork.

It was so fine that there was no need of a tent, so we laid our blankets down on the grass in front of a good fire, talked, smoked, and slept, the new moon giving just light enough to show us, to the westward, the black mass and rugged outline of Mount Wilson, whose highest peak reaches an altitude of 14,280 feet above sea-level.

Next morning, we were in the saddle again by 7 o'clock, and at 9.30 reached the San Miguel Lake, one of the most enchanting spots my travels have ever brought me to. The lake is about a quarter of a mile across, and situated in a deep basin, its altitude by my aneroid barometer being 9200 feet above sea-level; the surrounding mountain summits ranging between 12,000 and 14,000 feet, their scarlet peaks being reflected in the clear waters of the lake, and contrasting beautifully with the varied shades of green of the spruce, the balsam, and the quaking-asp trees which surround this lovely sheet of water. This range of mountains, the brilliant scarlet color of whose peaks is caused by the decomposition of the iron pyrites in the trachyte, extends east to Mineral Creek, which empties itself into the Animas River at the town of Silverton, in Baker's Park.

We had only traveled about seven miles; but the attractions of this supremely pretty spot were too powerful to resist, so we went into camp; and, getting my fly-hook and line out of my pack, I made for the water's edge as quickly as possible. Here I luckily found a rough raft moored; and, as it was too clear and shallow for fly-fishing near the bank, I went back and got one of the pack-ropes, and, with a stone at one end and the other made fast to the raft, I pushed out into the deep water—a dark green by reflection from the surrounding foliage—and there dropped anchor. I had cut a fly-rod from a clump of tall willows that grew on the bank; and, sitting down on the raft, I took out my line and stretcher. Putting on a drake's wing and a coachman, I made a cast, and almost before my drop-fly had touched water, my leader was taken, and I saw the big trout's red belly and silver sides flash as I struck him; a few turns tired him; and in half an hour I had thirty fish on the raft, averaging three-quarters to a pound each. This was as many as we could eat and carry the rest, so I reluctantly went ashore; and at noon we cooked twelve of the largest, and what's more, "got away with them." The flesh of these trout is firm and short, and red as any Saguenay salmon I ever saw, with much the same flavor.

At one o'clock, we were on the train again, and camped that night on the bank of the river, within seven miles of the Dolores camp. Trout for supper again—those we had brought with us from the lake—and next morning we were up at day-break; and before my companions had the coffee made, I had a dozen fat silvery fellows floundering on the grass, ready for breakfast.

We arrived at the camp at 10 A.M., and, going about half a mile below the group of tents that forms the embryo town, put up our tent, hobbled our stock, turned them out to graze, and made all snug for a few days' stay.

As nearly as I can ascertain, the first excitement on the Rio Dolores dates back as far as 1860, when Baker, of the well-known "Baker Expedition," and who was finally killed by Indians, went from the Dolores to California Gulch, in Northern Colorado, and, getting an outfit there, started straight back again to this San Juan region, which caused a rush there about July or August, 1860. Upward of 2000 people came in from New Mexico. A toll-road was built from Tierra Amarilla to Animas City, a bridge with stone abutments built across the Rio Blanco, and a town-site laid out at Pagosa Springs. Most of these people wintered in Animas City; but it was too early, and ultimately, I believe, the Navajos drove them out. At this time, too, work was done in Eureka, Picayune, Arastra, and Cunningham gulches, in the Animas District; and Gus Begole, who is one of our oldest prospectors, told me that when he was prospecting in 1869, nearly every creek in the country showed "'60 signs." The prospecting done in 1860 was for gold placers, and he found many places where the iron sulphurets had been pulverized between stones and then panned for gold. Baker and his party were, I believe, massacred in Utah, on the Colorado River, somewhere near the old Mormon Fort. Only two men escaped, and they made their way on a raft through the cañon of the Colorado River, one being washed off and drowned, while the only remaining survivor is, I believe, still living somewhere in Colorado. W. W.

Ouray, Aug. 6, 1879.

APPARATUS FOR HANDLING COAL AND ASHES AT THE BROOKLYN SUGAR REFINERY.

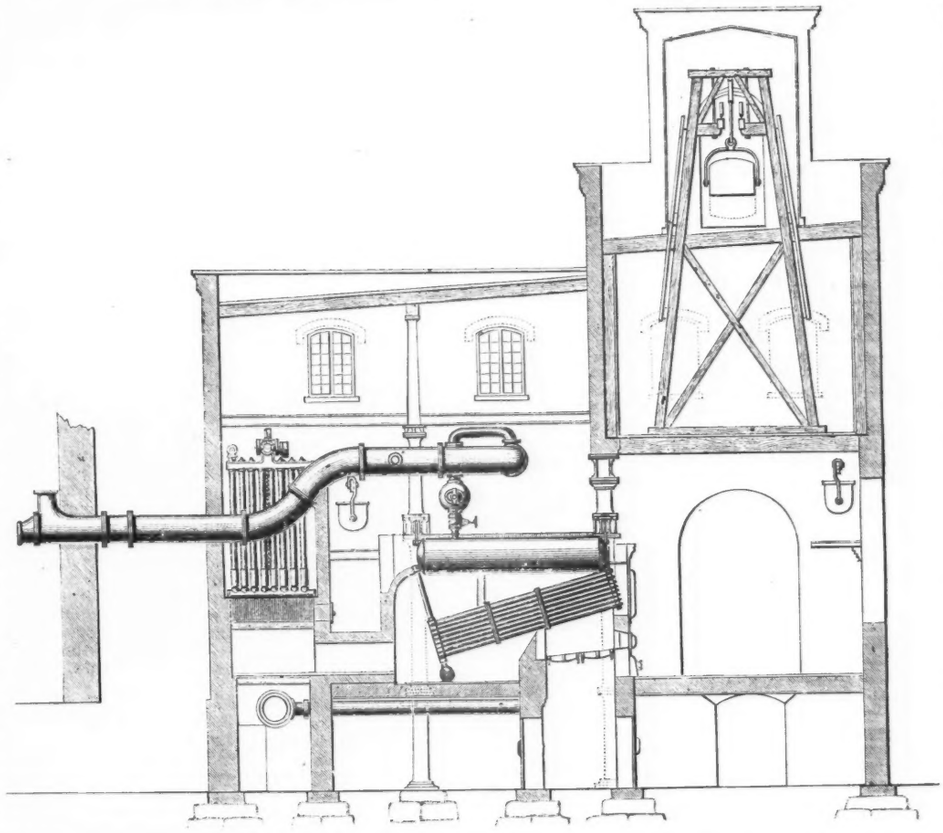
The production of many of the great staples of life necessitates frequent combination of the most practical appliances the age can afford. Probably no commodity equally extensively used as sugar requires a larger investment of capital in machinery and equipments necessary to prepare it for the market. Not the least factor leading to the necessities of this case is the fact that sugar is usually sold to consumers at such prices as leave but an insignificant margin for the retailer, a condition which encourages close buying, and demands of the refiner, on the other hand, that he shall employ the best known methods for cheapening the cost of refining the article.

Of late years, much progress has been made in this direction by the adoption of many ingenious labor-saving devices.

We present an illustration this week of an apparatus for handling coal and ashes, as employed in the Brooklyn Sugar Refinery, in connection with the *Babcock & Wilcox Water-Tube Boilers, Fuel Economizer, and Dumping Dead-Plates.* (For description of the class of boilers referred to, see Vol XXV., pages 358 and 359, of this journal.)

At the right-hand upper portion of the cut is shown the termination of an inclined railway. This railway projects over a coal-boat landing, and is traversed by a small car, to which a coal-bucket is suspended, hanging between and below the rails. This car descends the incline to the boat at the dock, into the hold of which the bucket is lowered and there filled, after which it is caused to rise to the car again, which is then drawn up the incline to the dumping point seen in the cut, where its arrival is automatically signaled. One operator controls the working of the whole apparatus, and thus accomplishes work which, with less complete appliances, would require many men to perform.

The movements of the car, loading and dumping of the bucket, etc., are all managed by a few simple adjustments of chain connections, so that the whole operation is repeated with the greatest ease and facility. The coal is stored in the building over the boilers, and is conveyed to the fronts of the furnaces by chutes, which are provided with suitable valves for regulating the discharge (cartage of coal being entirely dispensed with), and providing the firemen with the requisite amount of fuel just in front of their fires.



APPARATUS FOR HANDLING COAL AND ASHES AT THE BROOKLYN (N. Y.) SUGAR REFINERY.

This railway and carrying-device is employed for disposing of the ashes. As will be seen in the cut, an ash-pit extends into a basement beneath the whole boiler-room, into which, by the use of the patent dumping dead-plate referred to, all the refuse from the fires is discharged, without any dust or heat in the fire-room. The coal-bucket is lowered into the basement and filled, afterward hoisting and conveying the ashes to the boat.

At the extreme right hand of the illustration, half-way up the main building, is seen a small coal-bucket suspended on a circular railway, which makes a circuit of the building, and is used for distributing coal to the furnaces used for heating or reviving the bone-black. The heavy bent tube seen in the left-hand portion of the cut conveys steam to the sugar-house, of which a small portion only is shown. Behind this large tube, at its lower bend, are located the fuel-economizers described in our issue of last week. One thousand (1000) horse-power of the Babcock & Wilcox water-tube boilers furnish steam at present for the refinery, but foundations are already laid for double this amount.

SPEED OF ELECTRIC CURRENTS.—According to the recent investigations of M. Siemens, described in the *Industrie Blätter*, the speed of an electric current, under the circumstances of the experiment, is 30·2 geographical miles per second, or about 40 kilometers.—*La Correspondance Scientifique.*

CURIOUS BEHAVIOR OF LIGHTNING.—A house in the Avenue de Clichy was struck by lightning, which followed a water-pipe to the earth, and then reascended to the fourth story.—*Les Mondes.*

THE THOMAS DEPHOSPHORIZING PROCESS.

The following is the text of the specification forming part of the Letters-Patent No. 217,495 (known as the After-Blow), dated July 15th, 1879, granted to SIDNEY GILCHRIST THOMAS, of the County of Surrey, England. (See also the ENGINEERING AND MINING JOURNAL for July 26th, 1879, page 52.)

This invention relates to an improved process in the manufacture of Bessemer steel from phosphoritic pig-iron; and the invention consists in dephosphorizing the metal in a basic-lined vessel, with the addition of lime or lime and iron ore, to form a highly basic earthy slag, by continuing the blast for about from one to six minutes after the disappearance of the carbon-lines of the flame, and until there is emitted from the chimney copious brown smoke and a white smoke appears around the edge of the flame, as hereinafter particularly set forth.

In order to effect the more complete removal of phosphorus in the manufacture of Bessemer steel from phosphoritic pig-iron, I adopt the following process: I use a converter lined with a basic material, preferably of the kind already described by me in previous applications, and I cause a highly basic earthy slag to be produced—a condition which I have also before described as essential to the removal of phosphorus. I now find that this slag should contain a minimum of thirty-six per cent of lime and magnesia, and that in combination therewith a considerable "after-blow" is necessary for the most technically economical results.

In carrying out my process, I proceed as follows: Immediately before the metal is introduced into the converter, I throw into the converter an amount of lime (preferably magnesian lime), or of a mixture of about eight parts of lime to one of iron ore (prepared as hereinafter described), equal in weight to nearly twice the weight of the silicon and phosphorus together contained in the charge. I then blow for about from seven to ten minutes, or for whatever time experience shows is necessary for giving enough heat to enable the rest of the addition to be advantageously made, which generally amounts to half the average duration of the blow. I have found it best to use for blowing large tuyere-holes of from three quarters (¾) of an inch to one (1) inch diameter.

The converter is turned down, and about the same weight or a somewhat smaller amount than was first added of about two parts of lime to one part of iron oxide, such as non-siliceous hematite or purple ore, is thrown in. The exact amount of this basic addition is regulated by the character of the converter-bottom.

If the bottom wears away very little, a larger quantity of base will be required to be added, and *vice versa;* the object being always to get a slag with over thirty-six per cent of lime and magnesia, and from ten to twenty-two per cent of silica. I prefer that this addition should be very hot, or even molten. It may be conveniently heated in the converter flame, as spiegel is sometimes now heated. The mixture may be conveniently made by taking about four parts of non-siliceous magnesian limestone and one of oxide of iron, mixing them together, and making the mixture into rough bricks or balls, which are then highly calcined or melted in a furnace or kiln, and thrown hot into the converter.

If the pig treated is high in manganese, the proportion of iron ore in this mixture may be reduced considerably, and, if very much manganese is present, even lime alone may be used. After the addition, the converter is rapidly turned up and the blow continued.

The blow is not, however, stopped, as is now the invariable practice, when, or within fifty seconds of the time when, the flame drops and the carbon-lines (or, as they are sometimes called, the "oxide-of-manganese" lines) of the spectrum, as seen by the spectroscope, disappear, but is continued for from one minute to six minutes after the disappearance of such lines, and until there appears from the chimney of the converter copious brown smoke, and also a well-defined white smoke

around the edge of the flame. The duration of the after-blow will generally be from one fourth ($\frac{1}{4}$) to one sixth ($\frac{1}{6}$) the length of the ordinary blow up to the point when the carbon-lines disappear; but this depends on the amount of phosphorus originally present. As a check on the smoke indication, until the blower is accustomed to it, a sample may be taken from the converter after the smoke appears and hammered after cooling in water to ascertain if the phosphorus is gone. If the metal is hard, the vessel is turned up and the blow is continued. The converter is then turned down and the spiegel added in the usual way. As the Bessemer process is at present conducted, as is well known, if the converter is not turned down and the blow stopped when the flame drops and the carbon-lines disappear, a considerable loss of metal is caused, while the phosphorus is not removed. Great care is therefore taken to turn down the vessel when the flame drops.

I find, however, that by using a basic lining and large basic additions, so as to produce a highly basic earthy slag, in the manner described when blowing a phosphoritic pig-iron (by which I generally mean a pig-iron containing over four tenths ($\frac{4}{10}$) per cent of phosphorus, though my process is more specially applicable to pig containing over eight tenths ($\frac{8}{10}$) per cent of phosphorus), not only may the metal be "after-blown" in the manner herein described, without injury or waste to the metal, which, under these circumstances, and in the presence of a basic slag, is protected by the phosphorus, but with the greatest advantage in securing the more complete dephosphorization of the steel.

I do not claim as this invention the use alone of basic linings and large basic additions, the general utility of which I have described in prior applications; but what I claim is:

The herein-described process of dephosphorizing metal in the manufacture of Bessemer steel, consisting in blowing the metal in a converter, or other vessel lined with basic material and containing basic material, such as lime, or a mixture of lime and iron-ore, to form a basic slag, and continuing the blow for from about one to six minutes after the disappearance of the carbon-lines, and until the chimney emits copious brown smoke and the flame is edged with white smoke, substantially as specified.

A TIMELY WARNING.

EDITOR ENGINEERING AND MINING JOURNAL:

SIR: We notice the Bodie *Standard* is doing some excellent gratuitous advertising for your valuable journal in the matter of your caution respecting Bodie wild-cats. Your regular readers will remember that, some years since, you warned the public against a new process for working ores which was to accomplish wonders, and thereby you aroused the indignation of the mining papers of this State, and the animosity of the Eastern stockholders. But events proved you were right, and the process-bubble collapsed after an expenditure of $100,000 in experiments. With regard to the merits of the Maryland Consolidated, I have no personal knowledge. Many properties, not appreciated here as an investment, are taken to New York; and you are only doing your duty by calling attention to the recklessness with which New Yorkers are plunging into mining investments on the representation of Pacific Coast adventurers. The *bona-fide* mines of Bodie District may be limited to five in number. They are the Standard, Bodie, Bulwer, Syndicate, and Noonday. There are, perhaps, five others which give promise of being productive next year, and this, it must be confessed, is a pretty good showing for any mining district. But, to offset this, there are two or three hundred utterly worthless prospect-holes, which are incorporated in shares of 100,000, and baited before the New York public. In fact, the tricks so successfully played on the San Francisco public during the White Pine excitement of 1868–69, are now transferred to New York, and the result will be the same—collapse and disaster. In fact, there has been, in this Bodie matter, more newspaper "gush" than has ever before been inflicted on a suffering people. It is time to return to the realms of common sense, and "give us a rest."

SAN FRANCISCO, August 9, 1879. URSUS.

RUSSIAN PUBLIC WORKS.

The Russian government has under consideration a new project for the construction of a system of canals connecting the Caspian Sea with the Black Sea, and the project is discussed in a recent number of the "Journal" of the Russian Imperial Office for Public Works of Communication. The author of the new project is the engineer, M. A. Daniloff. He proposes to construct (1) a canal of some 300 versts in length from the river Terek to the water-shed of the river Manytsch, which connects the Don with the Caspian Sea, but the bed of which is generally dry; (2) a canal of about 320 versts, from the mouth of the river Kalans, a tributary to the Manytsch, eastward to the Volga, near Astrakan; (3) a canal from the same spot westward to the Don, about 350 versts; (4) a branch from the eastward canal to the Serebriakowskaya Station on the Caspian Sea; (5) a branch from the westerly canal to the Black Sea. Other Russian news states that the government has commanded the Khan of Khiva to furnish 5000 workmen for the works connected with directing the Oxus River into the Caspian Sea.

COST OF COAL PRODUCTION IN BELGIUM.

A recent paper by M. Berchem, Chief-Engineer of Mines in the Namur districts, gives, with other statistics, a little information on a point which has been very much discussed—the cost of production of coal. The total cost of production is stated as 11·02f. in 1877, and as 8·69f. last year. The manual labor needed cost in 1877 no less than 5·94f., and last year 4·87f. so that there was a fall of rather more than 1 per cent. In the other expenses there was, it is evident, a fall in the year of about $1\frac{1}{4}$ per cent. It is not expected that the fall in price in the year was so large as the fall in the cost of production which has been stated. It would be well if similar figures could be officially obtained for this country as a whole; but it is doubtful, if they were, whether there would be so large a reduction in the cost as there was in Namur during last year.—*The Engineer.*

PROGRESS IN SCIENCE AND THE ARTS.

General Science.

The Sphygmaphone—a new "phone," designed by Dr. Richardson, of London, which transmutes the movements of the arterial pulse into loud telephonic sounds—is described in the London *Lancet*. With two cells of a Leclanché battery, the pulse can be made to talk so loudly that the sounds may be heard by a large audience. As the construction of the sphygmaphone would hardly be intelligible without a detailed description and a figure, we refer our readers to the original source of our information. Another electrical novelty, lately brought out by Prof. Hughes, is called the audimeter (or audiometer), and its purpose is to accurately measure the power a person has of hearing sounds. A detailed description of this device, also, will be found in the *Lancet*.

Mineralogy, Chemistry, and Technology.

Uranium Minerals of North Carolina.—Prof. Genth has lately published in the *American Chemical Journal* (I., 87) the results of an examination of the uranium minerals, whose occurrence at a new locality, called Flat Rock Mine, in Mitchell County, N. C., was noticed some years ago by Prof. Kerr, Director of the Geological Survey of that State. The uranium minerals are found in the form of irregular nodules, and rounded masses "in the mica-bearing portion of a large granite vein." These masses contain a nucleus of uraninite, surrounded by orange-colored gummite, resulting from the alteration of the uraninite; and incrusting the gummite, and often interpenetrating it, is a yellow mineral substance which the author has determined to be uranotil, which has been formed by the alteration of the gummite, and into which the entire mass of the latter has occasionally been changed, yielding nodules of pure uranotil. The author finds his previous assertion that the substance gummite is a mechanical mixture, and not a definite mineral species, confirmed by this investigation. He also describes from this locality a new mineral species, found as a thin coating upon quartz, and which he has named phosphuranylite. Composition, a hydrous phosphate of uranium.

The Utilization of the Bamboo for paper making is again urged, this time by a writer in the journal of the London Society of Arts, who affirms it to be, for that purpose, far superior to esparto-grass, and to have the additional advantage that it may be produced at less cost. He is of opinion that by utilizing the spontaneous bamboo product of India—or, better still, by cultivating the plant there—an unlimited and unfailing supply of paper fiber could be produced. The suggestion, which we remember to have several times met with, to introduce this plant and the jute-plant into our own Gulf States, because of its value as a fiber-producing plant, has thus far amounted to nothing, though there would appear to be no difficulties, climatic or otherwise, to contend with in making the experiment.

Chemical Discovery.—The number of new elements with which chemistry has been enriched, during the past few years, is quite unparalleled in the history of the science, even in the latter portion of the last and the beginning of the present century, when the brilliant discoveries of Lavoisier, Priestley, and Cavendish laid the groundwork of modern chemistry and gave an enormous impetus to its cultivation. To enumerate, we have, commencing with gallium, discovered by Boisbaudran, in 1875, made the following additions to the list of elementary substances—all, with the exception of gallium, discovered since 1877—to wit: Davyum (Kern), named in honor of Sir Humphry Davy; Mosandrium (J. L. Smith), named in honor of the Swedish chemist, Mosander (this discovery is considered doubtful, and, if we do not err, has been abandoned by its author); Philippium (De la Fontaine), and named after M. Philippe Plantamour; Ytterbium (Marignac), found in the earth yttria; Decipium (De la Fontaine), named from its deceptive properties; Neptunium (Herrman); Lavoesium (Pratt), named in honor of Lavoisier; Scandium (Nilson), named in honor of his country; and in the technical journals of late date, we find the announcement (noticed previously in the JOURNAL) of Norwegium, by Dahll. Finally, it will be proper to add, M. Guyard, who has for some time suspected the existence of a new metal of the platinum group, asserts the correctness of his suspicions, and proposes the name Uralium (from its source) to distinguish it. This last is still hypothetical.

Engineering.

The Isthmian Canal Scheme of Lesseps, which has been the theme of universal newspaper criticism since our last references to it, seems to be already losing its hold on popular favor, even in France, with the element of national pride and the *prestige* of its distinguished advocate to strengthen it; while elsewhere, and notably in this country, the invitation to subscribe to its stock has fallen upon heedless ears. The present outlook for the enterprise is so doubtful that many do not hesitate to predict its early abandonment, or, if not that, then its ultimate failure.

In this country, the prevailing sentiment, it is safe to say, is decidedly opposed to the execution of this (or any similar proposed project) that is not under the direct control of Americans, a sentimental outgrowth of traditional fealty to that unwritten law held very widely as an article of political faith, and formulated as "the Monroe Doctrine."

The sharp criticism of the methods practiced by the French members of the International Conference, in securing the selection of the Wyse-Panama route, by hydraulic pressure, exercised upon what afterward revealed itself as a carefully pre-arranged programme, will doubtless explain the special disfavor with which the Lesseps scheme has come to be regarded with us.

But now that the importance of the Isthmian canal has been distinctly brought home to our people, and the existence of a wide-spread popular dislike to have such an enterprise upon American soil inaugurated, managed, and executed by foreigners, has been clearly demonstrated, why, when every thing is ripe for such a movement, does not some association of American capitalists bring out a plan for the canal? American engineers know more about the Isthmus than all the engineers of Europe combined; for their surveys are the only ones worthy of the name that have ever been made; the enterprise is one of paramount importance to the future commercial welfare of this country; and the publicity given to

the subject by the criticism of the Lesseps scheme by newspapers of high and low degree all over the country makes the present a most auspicious time for the serious undertaking of the Isthmian problem by American enterprise. We charge nothing for the suggestion, but with all deference to the judgment of the distinguished gentlemen who have in a measure committed our government to the selection of the Nicaragua route—with its 24 locks and three days for passage—we devoutly trust that this route may not be selected. The shortest tide-water canal between the oceans is the best, and will be the cheapest in the end.

An Elevated Railroad project of an important nature, the preparatory steps to which are affirmed to have already been taken, is at present attracting much attention in Philadelphia. The authors of the project are the officials of the Pennsylvania Railroad, and their plan contemplates the location of an immense passenger and freight depot to cover the block bounded by Sixteenth and Merrick and Market and Filbert streets, and the construction of an elevated road from the west side of the Schuylkill River to connect with the same. The general outlines of the project, as presented at a recent meeting of the Board of Directors, have been given as follows: The plan includes the construction of a double-track iron bridge across the Schuylkill contiguous to Filbert street. On the east side of the river (in the city proper), the track will continue down to Fifteenth street, along the south side of Filbert. The company has already become the owner, by purchase, of a large number of the properties along the proposed line; and when the remaining purchases are made, it is stated, there will be space enough for a roadway of nine tracks, without even encroaching upon the roadway or side walks of Filbert street. The grade of the road, it is further said, will be seventeen feet above the grade of the street, thus avoiding any obstruction of the streets at crossings. The terminus, located as above narrated, will be occupied by what is described as "a mammoth passenger and freight depot." The landing for passengers will be on the second floor, while the freight cars will be lowered to the street line, where such transfer is necessary, by means of hydraulic apparatus. The present railroad on Market street, which has long proved to be an obstruction to traffic, will be abandoned, and the warehouses along the line altered for the accommodation of turnouts on their second floors, so that freight cars may be run in from the main track on the line of that story. The cost of this improvement is estimated at between two and three million dollars. The present West Philadelphia depot, it is added, will be retained for the transaction of local business.

Engineering Projects (Foreign).—From London *Nature* we learn that the French government has decided to present to the Assembly for favorable consideration a bill for taking preliminary steps for the construction of a Soudan railway from Algiers to Senegal, by way of Timbuctoo. An official commission has been appointed to examine and report upon the subject.——We have further the report that a new project for the construction of a system of canals, connecting the Caspian with the Black Sea is now being considered by the Russian government. Other Russian advices affirm that the government has commanded the Khan of Khiva to furnish 5000 workmen for the works connected with directing the Oxus River into its ancient channel in the Caspian Sea.

Nordenskjold's Whereabouts, it seems, are still uncertain, as the lately published dispatches from Stockholm and Berlin, announcing that the Vega had been freed from the ice, and had made the passage of the straits, are now affirmed by agents of the Alaska Fur Company, who have the best means of verifying such an event, to be highly problematical. The latest advices from the neighborhood of Behring's Strait are to the effect that the season had been very late on the Asiatic side, and that, in consequence of the prevalence of strong easterly winds, the ice had piled up to such an extent as to render a possible passage of the Vega very doubtful.

IMMIGRATION.—The immigration into the port of New York for the fiscal year ended July 31st was 103,245, as compared with 74,139 for the previous year.

FRENCH DUTY ON CANDLES.—The stearine manufacturers of Paris and its district, who represent one third of the production of candles in France, and employ 6000 men, have petitioned for the abolition of the duty upon candles.—*Chemiker Zeitung.*

ANTISEPTIC ACTION OF ACIDS.—According to Sieber, a relatively small proportion of acid—0·5 per cent—prevents putrefaction. This property is conspicuous in the mineral acid and in acetic acid. Lactic and boric acids are much less effective.—*Journ. Prakt. Chemie.*

MAGNESIUM CHLORIDE FOR WATER-METERS.—According to Dr. F. Brockhoff, a solution of magnesium chloride is found preferable to water for filling gas-meters. There is no appreciable loss by evaporation, freezing is practicably impossible, and the gas is freed from ammonia.—*Chemiker Zeitung.*

BURIED FOREST.—Dr. Moesta, the geologist, has discovered the remains of an oak forest, at a depth of 7 or 8 feet, near Rotenburg. The number of well-preserved trunks is enormous; one of them is eighteen meters long, and one and a half meters in diameter. This bog oak will be used for carving.

PRICES OF THE RARE METALS.—Dr. Theodor Schuchardt, of Goerlitz, sends us the following quotations for the rare metals, to which we directed attention in our issue of the 18th ult.: Cerium, 20s. per gram; lanthanium, 40s. per gram; and didymium, 30s. per gram. These are obtained in globules by electrolysis. Thorium, in powder, is 36s. per gram.—*Chem. News.*

THE TAR COLORS AND THE ELECTRIC LIGHT.—Dr. Greiff contends that, even supposing the gas manufacture should ultimately be abandoned, the tar colors could be prepared from the residues left on rectifying the petroleum of the regions on the Caspian. These are estimated at 120,000,000 kilos. yearly, and are ten times richer in benzol and five times richer in anthracene than is coal-tar. The American petroleum has not yet been examined from this point of view, but it will probably also prove to be a rich source of aromatic compounds.—*Die Chemische Industrie.*

EVAPORATION OF WATER.—A paper was recently read before the Academy of Sciences, Paris, on "Evaporation of Water under the Influence of Solar Radiation through Colored Glasses," by M. Baudrimont. Green and red, in general, favor the evaporation least, while yellow and red favor it most. M. Baudrimont considers that there is probably a simple relation between the number and extent of the luminous waves and the number and extent of those which produce heat, in virtue of which they can be simultaneously propagated through a colored glass and concur in the effect produced.

EFFECTS OF SEWER-GAS ON ZINC AND LEAD PIPES.—Mr. T. Kinnear, sanitary inspector of Dundee, says: "I have paid particular attention to the action of sewer-gas on zinc rhones on eaves of buildings, where it was striking on the under part, and found in the course of a couple of years or so pretty large holes eaten completely through showing that that material could not long withstand the effect of the gas. Lead is, of course, more durable than zinc, but the difference is only a question of degree, as shown by the fact that, in not a few of the water-closets repaired by the officers of the department during the year, small apertures were found in the main vertical lead pipe, and in the cross or horizontal one leading from it to the trap of the closet various perforations were found on the top, indicating clearly the operation of foul air from the drain. Lead traps and soil-pipes from water-closets, baths, and fixed basins are all subject to tear and wear; but the traps, being burdened with the additional strain of barring the passage of sewer-gas, do their work less efficiently, and for a much shorter period, than they are generally credited with; hence the necessity for proper ventilation and occasional inspection."

THE PRINCIPAL KINDS OF FIRELESS LOCOMOTIVES.*

By M. Lavoinne.

The first fireless locomotive, invented by Dr. Lamm, of New Orleans, was worked by ammonia in a gaseous state. The ammonia, on leaving the cylinder after moving the piston, was condensed in water, and then reconverted into gas by heating the water to 135°, and again utilized. Locomotives of this type worked on a tramway along the principal street of New Orleans in 1870 and 1871. Their speed was about 6¼ miles an hour, and they were said to be cheaper than traction by horses.

Dr. Lamm next designed a locomotive worked by steam, produced from a reservoir containing "superheated water,"† in a reservoir placed on the locomotive, supplied from a boiler stationed at a point on the line. A tramway, 3 miles long, from Carrollton to New Orleans, has been worked by locomotives on this principle since 1873. The steam formed in the boiler is maintained at a pressure of nine or ten atmospheres. The reservoir is cylindrical, 6½ feet long, 3 feet in diameter, and made of ¼-inch steel plates. It is enveloped in a non-conducting covering, so that the loss of pressure per hour does not exceed ½ atmosphere in summer, and ⅛ in winter, with the thermometer standing at about 40°. The pistons, having a diameter of 5 inches, and 7 inches stroke, work a crank-shaft, which, by a toothed pinion, gives motion to a spur-wheel on the axle of two of the four wheels of the locomotive. The wheels have a diameter of 2 feet 5½ inches. The locomotive weighs altogether 4 tons, which is also the weight of the carriage drawn by it, with its complement of eighteen passengers. The rate of traveling is generally 7½ miles an hour, and the locomotive can be stopped within a distance of 20 feet in three or four seconds. The daily cost of working the tramway, with ten locomotives, performing 120 miles each per day of 19½ hours, was £13 16s. during the first year, which was a saving of 15 per cent on the previous year, when the work was done by mules; and the expense of working the locomotives has since decreased. The advantages of this system are, its simplicity and cheapness of installment—the locomotive costing £240, and the steam generator, fixed complete, £1600. But the fixed boilers which generate the steam are externally fired, and produce only 3¾ lbs. of steam for each pound of coal; moreover, the steam is worked without expansion. The journey lasts fifty minutes, and in that time the pressure in the reservoir, which, at starting, contains ⅞ of water and ⅛ of steam, is reduced from about 8¾ atmospheres to 5 atmospheres. The results, however, even with all the faults attendant on the first development of a new system, are considered to be sufficiently satisfactory to warrant the establishment of two other lines worked by fireless locomotives.

Several of the defects in the original fixed generator and in the locomotive have been remedied in the new apparatus designed by Messrs. Scheffler, working on the tramway along Tchoupitoulas street, in New Orleans.

The multitubular boilers erected are much more efficient, and, while much smaller than those in use on the Carrollton line, produce steam at a pressure of 13 atmospheres with a saving in fuel, as compared with the first kind of fixed generator, of one fifth. The steam is worked expansively in the locomotive; and the pistons, which are 4⅜ inches diameter by 10 inches stroke, act directly on the axle of the driving-wheels. The front portion of the locomotive, carrying the steam reservoir, is hinged to the rest of the machine, so that running around curves is rendered easy and safe. The driving-wheels have a diameter of 2½ feet, and the leading-wheels 1⅔ feet. The steam-reservoir is 2 feet 6¾ inches in diameter, and 8 feet 10½ inches long, and is intended to hold generally about 264 gallons of superheated water, its total capacity being 323 gallons. The pressure in the reservoir tends to lower considerably at the outset, owing to the difficulty, in filling the reservoir, of imparting the full temperature to the lower layers of water.

Fireless locomotives are replacing traction by horses in New York, Chicago, Brooklyn, and several other cities in America.

These locomotives, with important improvements introduced by M. Francq, have been tried in France on the tramway between St. Augustin and Neuilly. The improvements relating to the noiseless escape of the steam from the cylinders, the facilitating the passage around curves, and the regulation of the pressure of the steam, have been previously referred to.‡ The reservoir is protected by two coverings, with an intermediate air-space, to prevent loss of heat.

By means of a double set of apparatus, the driver is able to direct the

*Abstract of a paper in *Annales des Ponts et Chaussées*, 5th series, vol. xvi., p. 261. From the Proceedings of the Institution of Civil Engineers of London, edited by James Forrest, Secretary.

† *Superheated water*, sic in original.

‡ *Vide* Minutes of Proceedings Inst. C.E., vol. xlv., p. 289; vol. li., p. 320.

motion from either end, thus dispensing with the necessity of turning the locomotive around at the end of its journey. One of these locomotives, weighing about 8 tons, was able to run easily around curves of 14¼ yards radius, at the rate of 10 miles an hour.

The author gives some formulæ, deduced from the calculations of M. de Mondésir,§ on the efficiency of fireless locomotives, which indicate the following facts: That the weight of water evaporated is directly proportional to the decrease of temperature, and inversely proportional to the quantity of dry steam: that the work corresponding to a fall of temperature is measured by the fall; and that the efficiency increases more rapidly than the temperature, which indicates the advantage of high pressures.

The author considers that, for short distances in towns, the fireless locomotive is the best, owing to the absence of fire, smoke, fear of explosion, and noise; and that it is also the most economical, owing to the smaller staff of men required, and to the heat being generated continuously at one place. It has, however, one notable defect, that of not being able to exert additional force in case of need. Its power also gradually decreases, so that it is not suitable for a tramway with steep gradients, unless such gradients are situated near the commencement of its course; and a certain regularity in the number of passengers is desirable, as it is difficult to provide for considerable variations in the weight to be drawn.

PETROLEUM NOTES.

COMPARATIVE SYNOPSIS OF REPORTS FOR JUNE AND JULY, 1878 AND 1879.

42 GALLONS = 1 BARREL.	1879. June. 30 days.	1879. July. 31 days.	1878. June. 30 days.	1878. July. 31 days.
	Bbls.	Bbls.	Bbls.	Bbls.
Stock at wells	250,922	250,922	260,300	134,734
Production for the month	1,653,150	1,714,517	1,217,250	1,283,865
Daily average production	55,105	55,307	40,575	41,415
Iron tank stock	6,989,728	7,079,210	4,817,889	4,896,866
Total stock in the region	7,240,650	7,330,132	5,078,189	5,031,600
Shipments out of the region	1,369,314	1,625,035	1,135,119	1,330,454
Number of producing wells	11,223	11,468	9,605	9,766
" " drilling wells	384	329	266	188
" " " " completed	330	327	269	203
Average daily production of new wells in bbls.	25·3	22·6	14	14 5

THE GREAT NORTHERN PETROLEUM FIELD.

Below we present the business of the Bradford or Northern District, from the commencement of operations in 1875 to August 1st, 1879, giving in tabular form the production, shipments, and number of producing wells, with their production each year, showing that, without pretense as an important producing district in 1875, it has steadily increased in production until the present time, and is now producing more crude petroleum than all other oil-fields on the American continent combined:

YEARS.	Production.	SHIPMENTS AND DESTINATIONS. Total.	New York.	Philad'l-phia.	Baltt-more.	Bos-ton.	Cleve-land.	Local points.	Number producing wells.	Average daily production per well.
	Bbls.	Bbls.	Bbls.	Bbls.	Bbls.	Bbls.	Bbls.	Bbls.		Bbls.
1875	20,039	15,416	9,230	2,579	..	.....	547	3,060	15	14
1876	382,708	322,721	201,139	63,707	41,265	.....	1,130	15,420	400	8
1877	1,465,481	1,402,307	1,137,914	182,921	4,322	2,488	.....	84,642	1,000	6¼
1878	6,2?,8,746	4,505,816	3,465,004	670,332	176,668	16,003	2,065	175,744	2,950	8½
1879, 7 months.	6,852,642	4,121,692	2,880,905	636,469	284,224	37,870	169,897	112,827	4,400	9
Totals*	14,929,676	10,367,952	7,684,212	1,556,008	506,479	55,961	173,639	391,693	.....	9 1-5

* To August 1st, 1879. —*Stowell's Petroleum Reporter, August 15th, 1879.*

THE MARKET AT NEW YORK.—The *Shipping and Commercial List* of August 20th says: "There are no new features of interest to note, the general market still being dull, with prices not materially different from those given in our last.

"*Crude* is still quoted 2¼ cents in bulk, and 5@5¾ cents in bbls., with little or nothing doing.

"*Refined* remains quiet, and closed tame at 6 5/16@6⅜c. asked for New York delivery, both prompt and future, the inside figure for re-sales, and 6¼c. asked for Philadelphia and Baltimore. Sales about 35,000 barrels, at 6 5/16@6⅜c. for New York loading, and 6¼c. for the other ports. Cases are in moderate demand, at 8¾@9c. for ordinary brands as to delivery; sales, about 55,000.

"*Naphtha* is nominally 4@5c., with no business transpired.

"*United Certificates (Crude).*—The market has been quiet, but closed weaker. The opening price was 66⅞ cents bid, and 67½ asked; closing 65⅝ bid and 66¼ asked. Sales at the New York and Oil City Exchanges, about 525,000 barrels.

"LONDON, August 19.—Refined spot dull, 6⅜d.; last four months dull, 6¼d.

"ANTWERP, August 19.—Refined firm, 16¾f.

EXPORTS OF REFINED, CRUDE, AND NAPHTHA.

	1879. Gallons.	1878. Gallons.
Since our last	4,528,055	.....
Previously since January 1st	156,182,712	124,830,911
From other ports	63,177,289	50,629,342
Total	223,888,056	175,460,253."

The same authority observes, with reference to the German duty on petroleum: "The duty on petroleum is six marks per 100 kilos, gross weight, or about 4¾ cents per gallon, same on crude and refined; consequently, no German competition for refining is to be expected; what changes there may be in the future respecting a lower duty on crude in Germany is impossible to say."

THE MARKET AT TITUSVILLE AND THE TANKAGE QUESTION.—We are indebted to the Titusville *Herald* of the 18th inst. for the following:

§ Minutes of Proceedings Inst. C E., vol. xlv., p. 289.

"With reference to the arguments now pending between the tankers, with their 2,000,000 barrels of iron tankage, and the Pipe Lines and our leading house with their 9,000,000 barrels of stock, we should say there had been a blunder made.

"On the 31st of May, the Pipe Lines announced to the producers that their tanks would be considered empty on the 21st of June, and that July 1st they would commence a new era in the conditions and management as to storage of oil.

"The Pipe Lines made a blunder when they declared that the producers' tanks would be empty at a certain date. The production was increasing, and their shipping facilities were inadequate to meet the time appointed. To illustrate: Suppose the production in Bradford were 50,000 barrels per day. On the 1st of August, the 2,000,000 barrels of iron tankage would be full the second time, less the amount shipped. In other words, we would have 4,000,000 barrels in 2,000,000 barrels of iron tankage, less the amount shipped. Now, we know that there were shipped 1,500,000 barrels in the period spoken of. Thus we see that 500,000 barrels of somebody's oil must have gone on the ground, and would continue to go to waste until the amount of tankage were built by somebody. If argument will build tankage, then we may expect relief, otherwise the oil must be expected from time to time to overflow, or to go to the winds with the arguments.

SHIPMENTS.

United shipments, August 15th	59,528
Total for month	842,895
Daily average	56,193

CHARTERS.

Charters, August 15th	62,300
Total for month	583,195
Daily average	39,213

BRADFORD RUNS.

United, August 15th	44,775
Tide-water	4,502
Total United for month	663,405
Total Tide-water for month	45,571
Grand total (United and Tide-water)	708,876
Daily average	47,265

"Business opened this morning with 66⅞c. bid for old, and ten-day oil offered at 67½c."

THE STANDARD COMPANY'S NEW SHIPPING POINT.—The Standard Oil Company has bought a farm of twenty-one acres at Bergen Point, N. J., paying therefor an aggregate price of $240,000, or $20,000 an acre, which is the highest price ever paid for unimproved farm land in the vicinity of New York. There is no dock, street, or improvement of any kind upon the property. The company will erect a refinery, tanks, stills, and necessary buildings, which will be occupied in addition to the extensive works now at Hunter's Point.

VOLCANIC OIL-WELL IN CATTARAUGUS COUNTY, N. Y.—OLEAN, N. Y., August 10.—An oil-well on Kendall Creek, near Tarport, having ceased to yield oil, the operators pulled up the tubing, and as no obstruction was found in that, it was decided to torpedo the well. Before arrangements were completed for the operation, a sound like that of steam escaping from a locomotive-valve and then a rumbling noise were heard in the well, and a trembling of the earth was felt. Presently a shower of stones, ashes, and dry dust, accompanied by a dense cloud of gray smoke, was thrown in the air. The eruption lasted only a few seconds, and then oil began to flow copiously. The well has since been yielding nearly double its former quantity. The stones thrown up from the well were rough and light, like pumice-stone. The ashes were red and gray.

DEVELOPMENT OF THE PETROLEUM INDUSTRY IN ITALY.—The new steam railway connecting Rome with the oil-producing country was opened on June 15th. It follows the old highway to Tivoli, and has, of course, the same ugly curves—a defect which will be remedied. On the opening day, two engines, drawing three cars, seating 40 persons, left the station at 1 P.M., and arrived at Tivoli at 3 P.M., passing over the ground and the steepest grades with ease.

GENERAL MINING NEWS.

CALIFORNIA.

THE BODIE DISTRICT.

We condense the following from the *Standard* of the 9th inst.: "The foundations for the new Noonday 30-stamp mill are being laid, and quite a town is springing up about it, or, perhaps, it would be better to say that the town of Bodie proper is stretching itself to the south to inclose it. It is a current report, and one very generally believed, that the Bulwer Consolidated Company is about to commence the erection of a new 30-stamp mill at the mouth of the company's tunnel. There is known to be plenty of money in the treasury [How about ore in the mine?—ED. E. AND M. J.] to carry out such an undertaking, and as it is of all things the most necessary, it seems very probable. The most important event of the week, in a mining way, was the new development in the 400 level of the Red Cloud. [Was it as big as the "four feet of gold-bearing quartz" in the Maryland Consolidated?—ED. E. AND M. J.] The steady improvement in the Packard & Morton vein alone, from the surface down, in connection with its great width, to say nothing of the four other strong ledges of the company, would fully justify the Red Cloud people in putting in a pump and going down out of the break and surface disturbances. The Defiance, its first neighbor at the north, is prepared for the most extensive work. Dudley will have a pump on the ground before the close of this week, and will recommence sinking within a short time. Bodie shows continued improvement in the winze and stopes. The Standard, of course, is turning out its usual quantity of bullion.

"The shipments from the district for the month of July aggregate $170,600. In the Tioga mine, the main shaft is down 41 feet below the 520 level. In the Syndicate drift, same level is now in 270 feet. The winze on the Yerrington vein on the 320 level is down 158 feet. The ledge maintains its usual size and strength. In the Standard Con. mine, the west drift, 385 level, is in 300 feet; stopes on the ledge are said to be from 7 to 15 feet in width in fine ore. The winze in the west cross-cut, 550 level, incline, is down 47 feet. Active work is going forward in all parts of the mine, and the outlook is encouraging."

A dispatch dated San Francisco, August 21st, says: "The mining capacity of Bodie District is at present no greater than it was a year ago, and includes but 54 stamps—20 at the Standard, 20 at the Syndicate, 10 at the Bodie, and 4 at the Miners' mills. Within a very brief period, certainly within three months, this will be more than doubled by the erection of the Noonday mill of 30 stamps, and another, to be used by the Standard and Bulwer, we believe, of 30 stamps also, making a total of 114 stamps. There is some talk of adding 10 more stamps to the Bodie mill, which would give us 124 stamps, instead of 54 stamps, as at present. The effect of this enlarged capacity will soon be seen in

increased shipments. It is probable that the Standard dividends will be increased to $1 a share monthly when the new mill is finished."

THE BONANZA SUIT.

SAN FRANCISCO, CAL., August 21, 1879.—In the Twenty-third District Court, to-day, John H. Burke brought a suit against J. C. Flood and James V. Coleman, executors of the estate of W. S. O'Brien, deceased, to recover $26,015,000. This is a duplicate of the suits against Flood, Fair, Mackey, and others, now pending, and is brought to prevent a distribution of the O'Brien estate.

COLORADO.

We are indebted to the *Register-Call* of various dates for the following:

"A series of tests of ore from different parts of the mines of the Eagle River District gives a result of from 12 to 103 ounces of silver, and from 11 to 70 per cent of lead to the ton.

"The Little Alley, Clinton, and Eagle Bird mines show good mineral in veins from 12 to 15 feet in thickness. The mines are principally owned by residents of Leadville, which is about 30 miles distant from Eagle River; about 200 miners compose the camp, and efforts are being made to erect smelting-works. A very rich streak of ruby silver is reported as having been made in one of the claims.

"The Monmouth-Kansas stamp-mill was shut down on the 11th inst., occasioned by the breaking of machinery.

"A vein of silver-bearing ore, which has been named the 'Swamp Angel,' has been discovered at the head of York Gulch, in Gilpin County. A number of shafts were sunk through a slide in the mountain. A drain ditch, 200 feet in length, was run before finding the main-pay streak. The discovery shaft is down 35 feet, showing assays of from 33 to 148 ounces to the ton. A lot of ore sent to the smelting-works turned out 115 ounces to the ton.

"On the south slope of Mount Pisgah, a shaft was sunk to the depth of nearly 100 feet, disclosing ore which assays very little. The Rattler mine, a re-location on the north of Mount Pisgah, shows both gold and silver. Indeed, if all the mines of this district were properly opened, it would be a very promising camp.

"In the Quartz Valley District, a silver-bearing lode has been discovered on the Harper Ranch; developments thus far not extending lower than 50 feet.

"On the Dutchman Lode, in Quartz Hill, Nevada District, a strong and well-defined gold vein has been encountered. This property has been explored by six different shafts of different depths.

"It is believed that the mine which is called the Dutchman's Lode will pay well if properly managed."

The Boulder *News and Courier* of the 15th inst. says:

"The lessees of the Poorman's Relief Lode, which is located south of the Pride of the Mountain Lode, are making it pay at the rate of about $7 per day to the man. The recent shipment from the mine is very satisfactory.

"The Peruvian mine, located at the head of Snake River, shows a fine vein of galena, from 2 to 4 feet thick. In this property are opened up 3 shafts, and a cross cut tunnel driven 215 feet, which has not yet intersected the lode.

"The proposed erection of smelting-works at Ruby is giving quite an impetus to the development of the mines of the district. There are now 250 miners actively engaged in prospecting and mining here.

"A recent shipment from the Gray Eagle lode milled 160 ounces of silver. Mill-runs obtained from the Bulldozer and Little Chief lodes returned 160 to 168 ounces of silver per ton. On the Little Chief, Delaware, Leadville, Aldrich, Sub-Treasury, and Modoc lodes, active work is going forward with encouraging prospects.

"Large quantities of good ore are being taken from the Colorado Central mine. The stock of the Terrible Mining Company was recently selling in London on a basis of $560,000 for the whole property."

We take the following from the Silver Cliff *Miner* of the 15th inst.: "The Dirigo mine, situated about three quarters of a mile from the Bassick mine, at a depth of 48 feet, discloses an eight-foot vein of ore carrying gray copper, and 2 inches of galena and granulated iron, and pyrites ranging from 81 to 310 ounces silver to the ton. This mine is being worked with the greatest of energy, and it is anticipated will soon begin the shipment of ore."

The same paper observes that "sales of three large mining properties are pending, which will be consummated by noon on the 15th inst. One of these sales will reach a quarter of a million of dollars."

The King of the Valley mine, a quarter of a mile north of this place, has its shaft down 165 feet. It is proposed to sink to the depth of 400 feet. There are 800 tons of ore on the dump, which, it is said, will average $40 per ton. The Horn-Silver mine, situated at the base of Brown Mountain, has been sold to New York parties. The ore of this mine, it is said, will yield from $25 to $45 per ton, there being 1000 tons now on the dump.

The Racine Boy and Cliff mines sold, prior to May 1st, about 1000 tons of ore averaging over $100 per ton. It is said that there are 6000 tons of ore on the dump worth $25 per ton.

The Colorado Springs *Gazette* of the 13th inst. says: "A rich strike is reported on Turner Mountain—which is located in Gunnison County—of argentiferous galena and zinc. These mines are at an altitude of 11,500 feet."

THE MOSQUITO GULCH CA RBONATES.

The Fair Play *Flume* of the 14th inst. says: "The excitement over the discovery of enormous bodies of carbonates near Buckskin Joe is increasing. The location of these mines is at what is called and known as the 'Loveland Bonanza,' in Buckskin Gulch, on the slope of the Mosquito Mountains, two miles above Alma and seven miles from Fair Play. The entire ground of the three mines above, and two mines below, the two mines on the east and west, is staked off. A bond on the following properties has been executed: Mountain King lode, Mountain Queen, one half of the Mountain Queen extension (the Fanny Barrett), one-half of the Flat mine, and two thirds of the Pride of the Hills, for the sum of $100,000; to run for thirty days. Ore taken from some of these mines, at a depth of from 7 to 10 feet below the surface, averaged from 30 to 60 ounces to the ton."

The Placer mines of Iowa Gulch, located near Breckinridge, are opening out well. The San Juan *Prospector* says: "The Anna mill has recently run several tons of dirt through the mill from the placer claims, which yields three dollars to the ton. This is claimed to be the richest strike yet made in the Summit, as the dirt can be milled three times faster than the regular ore.

"The freighting outfit, loaded with 13 tons of carbonates from the Dolores country, passed through Del Norte on the 9th inst., *en route* for the Pueblo Reduction Works. The Santa la Saria Silver Mining Company, of Boulder County, has recently put a small force of men at work in one of its lode-veins, and ores sent to mills within the past few weeks show the following returns, coin value, per ton, namely: $81.40, $83.60, $143.51, $145.20, $157.17, $187, $266.68, and $392.70, while the dump ores and screenings will yield from $30 to $45 per ton. These ores are from only one vein of the six lodes owned by the company, which are known as the Blue Bird mines. The company now has in contemplation the erecting of a mill at its mines, where it has ample water-power for an unlimited amount of machinery, and fine bodies of timber on and around its premises.

"The owners of the Saxon and Red Rogers mines, in Poughkeepsie basin, have just let a contract on the Saxon for 225 feet of work under the most favorable auspices. This mine has already produced the richest ore ever taken from a mine in San Juan, running from 500 to 1500 ounces of silver to the ton. They are also working the Red Rogers with a large force of men, with flattering results.

"The Junction Creek mines, which are exciting considerable interest, are situated in La Plata County, California Mining District, at the head of Junction Creek (a small stream emptying into the Rio Animas just below Animas City), and about fifteen miles from Animas City, west of the road leading to Parrott City. The nearest wagon route yet to these mines is the public road leading to Parrott City although parties easily reach the mines on horses and with pack animals. Very many claims have been located and worked or are now being worked, of which every one of the many that have been tested by assay has yielded gratifying returns, varying in amount from $25 to $2200, with an average of $250. This is rock from near the surface.

"The owners of silver mines on the Howard Fork, having no place to treat their ores, are shipping them to Pueblo, a distance of two hundred and seventy miles, costing them some $70 per ton."

"A contract has been let by the owners of the Little Nell mine, of Leadville, to sink a shaft 50 feet and run a tunnel 30 feet from the bottom of the same. Very rich ore was recently taken from the Garibaldi mine, of Golden District. Shaft is down 100 feet, and a tunnel run 75 feet. Some very rich ore is being taken out of the Evening Star mine from a 35-foot shaft.

Affairs are progressing very favorably at the Dunderberg mine, and it will soon be in a condition for regular mining operations.

Nearly $200,000 were invested in the mines at Tin Cup, Colo., during July.

A one-third interest in the Crystal Park mines has been sold for $40,000.

DAKOTA.

THE DEADWOOD (BLACK HILLS) MINES.

Mr. Z. L. White, the careful and intelligent staff correspondent of the New York *Tribune*, writing to that paper under date of August 5th, says:

"Of the mines in the vicinity of Deadwood that are on veins, but which do not constitute a part of the great 'belt' described in a former letter, the most important is the Caledonia, some of the stock of which is now being offered in New York. This company owns three claims—the Caledonia, the Queen of the Hills, and the Grand Prize—and these have now been consolidated with the Clara Number One. The first three claims cover a territory 1500 feet long and 900 feet wide, and the Clara property is 1500 feet long and 200 feet wide. The former lies 1000 feet west of the Golden Terra property, and the latter 400 feet from the Homestake mine. This property was purchased, about a year ago, by Mr. J. W. Gashwiler, of California, who paid $65,000 for the Caledonia and $30,000 for the Queen of the Hills and the Grand Prize. The Clara cost $30,000. The first company was formed in San Francisco, 100,000 shares being issued at a par value of $100. The Clara was not included in this organization. About 48,000 shares were sold at from $1 to $5 each. The consolidation with the Clara was recently effected in New York, and the number of shares increased to 200,000. The price nominally asked for the stock in New York is, I believe, $4; but I understand that some of it has been sold for less. Caledonia stock is quoted in San Francisco at $2 to $2.25.

"This mine has been well developed, and appears to be very similar in character to those on the great belt. The present workings are in two levels, one of which is 90 feet above the other. The discovery was made well up on the hill, and the lower tunnel, which has been driven in more than 600 feet, struck the discovery ledge at a distance of about 450 feet from its mouth. The tunnel passes through this ledge, which is 42 feet wide at this point, and a drift has been cut in it for a distance of 136 feet. The ore yields on an average from $6 to $7 a ton. At a point 160 feet beyond that at which the discovery ledge was found, the main ledge was struck, and the tunnel has been driven across it for a distance of 28 feet, the face of the tunnel still being in ore. On the upper level, the tunnel has been driven in 249 feet. At a distance of 140 and 180 feet respectively from its mouth, two small ledges of quartz were found, the first 14 and the second 18 feet in width. These unite to form the 42-foot ledge mentioned as having been found in the lower level. The ore in these is of low grade. On this level the main ledge has been cut about 85 feet, the face of the cut still being in ore, with no signs of the hanging-wall. The vein has been developed on this level for a distance of about 400 feet. From the upper level to the surface, where the quartz crops out, is on an average 120 feet.

"The ore of the Caledonia mine looks exactly like that taken from the mines on the great belt. It consists of quartz stained with oxide of iron, the slate walls near the contact with the quartz being also impregnated with gold. Some of the finest specimens of free gold—that is, particles of gold large enough to be seen in the rock—which I have seen in the Black Hills were in the slate taken from this mine. During the development of the property, a twenty-stamp mill has been run on the ore taken out, and has produced about $60,000. A 120-stamp mill is now to be erected, and to be paid for partly out of a working capital of $125,000, which is to be reserved from the amount received for the stock sold in New York and partly from an assessment of 50 cents a share that has been made upon the stock. This mine is looked upon as a very promising one by many of the most experienced men in the Black Hills.

"I have spent one day in visiting the cement deposit mines of this district. These deposits are generally found well up upon the hills, and vary in extent and thickness. The ore looks like a conglomerate rock in which the pebbles and boulders have been worn smooth by the action of the waves, and generally stained red by the oxide of iron which binds them together. In a few cases, the oxide of iron is absent, and the rock has a gray color. Among the cement mines which I have visited are the Great Eastern, which is yielding about $7500 a month; the Aurora Consolidated, putting out about the same amount; the Gustin, producing $12,000; the Reno, $8000; the High Lode, and others. The ore from these mines is treated like that taken from the veins—it is crushed in stamp-mills and amalgamated."

We condense the following from the Central City *Herald* of recent date:

"The De Smet mine is being steadily worked, running 80 stamps. At the Sam mine, 12 men are at work: part of them are running a tunnel to strike the ledge 75 feet below the old workings.

"The principal block of ore crushed at the 60-stamp mill of the Deadwood mine, is taken from large open cuts and is of very good quality. This mine possesses many advantages for working, and the ore is probably mined and milled at as little expense as that of any mine in the Hills.

"A large force is employed at the Golden Terra Mining Company's mine and mills, which are kept constantly running. The Gopher mine is being run by a small force of men. The Thompson 20-stamp mill is crushing this ore, and the last clean-up was quite satisfactory to the owner. Sufficient ore is being taken from the Great Eastern mine to keep the 20-stamp mill in constant operation. Forty stamps are continually kept running on ore from the Sir Roderick Dhu mine. Increased milling facilities are contemplated for this property. The Golden Eagle, a mine located at the head of Saw-Pit Gulch, promises very well."

From the *Times* of the 14th inst. we condense the following:

"The Castello mill has been standing idle for some time; but will soon start up on Old Abe ore. Rich silver carbonates are reported to have been struck on the hill south of Bald Mountain. Assays made from surface ores have gone very high. A great deal of excitement exists, and developments will begin at once to determine their value. Rich gold-deposits have been found at Four Mile House, which is located some 8 miles from Custer. A number of people have gone to the new fields to prospect."

We take the following from the *Pioneer* of the 9th inst.:

"Very encouraging reports come from the Hardscrabble District, which lies upon the divide between the north and main branches of Bear Butte Creek. A number of mines are located here, the principal one being the Sunday mine, which has an 80-foot shaft, and a cross-cut showing a body of ore 8 feet in width, carrying considerable gold. The Pocahontas mine, located at Bobtail Gulch, has

struck a body of ore. The Lu Lu mine, of Poorman's Gulch, is developed by a tunnel 200 feet long, 90 feet of which run through a body of ore."

NEVADA.

THE COMSTOCK.

The Gold Hill *News* of the 13th inst. says: "Ophir is looking and yielding well. Sierra Nevada has developed into a mine with a large amount of paying ore in it, which will soon be extracted and milled. That the ore-body extends into the Union mine, will also be established.

"In working the mines of the north end group, the Sutro Tunnel is an important advantage, as connection with it obviates the danger of sudden floodings, and development explorations can be all the more boldly proceeded with. Sierra Nevada will soon have the requisite pipes laid to carry off the water which is now impeding operations, after which new ore-developments, promised by the diamond drill, will be in order.

"The large new working shaft of the Scorpion Mining Company, now being commenced, will be second in magnitude to none on the Comstock.

"The flooded mines still continue to be flooded at their lower levels, but the water in both Savage and Hale & Norcross is steadily but slowly being reduced.

"Of the main Gold Hill group, there is little to be said. Great hope is indulged in with regard to the promised bonanza developments to be made on the 3000 level of the Crown Point and Belcher, and Yellow Jacket also has improved prospects. Alta is shipping ore to Briggs's mill regularly, and has a large amount of it in sight.

"'Visiting-day' is regarded as practically a dead letter, yet its loss or deprivation will, after all, make very little difference, so far as the practical development of the mines is concerned. That periodical occasion has worked more for the benefit of manipulators than any body else. On the other hand, it may be said that the insiders are given all the better chance for uninterrupted diamond drill explorations and surreptitious prospecting.

"On the 11th instant, the Sutro Tunnel Company received its first installment of 'royalty,' amounting to $8500, from the mines of the Comstock, in accordance with their drainage contract and the compromise with the mining companies. This might be practically considered first blood for Sutro. At all events, it is the first financial return for the large amount of money invested in that great tunnel enterprise. It was paid by the bonanza mines, from bonanza bullion. It is to be hoped that this royalty will rapidly increase in quantity."

STRIKE IN THE SUTRO TUNNEL.

SAN FRANCISCO, CAL., August 21, 1879.—The Sutro Tunnel Company has started another tunnel northwardly, at a point 1200 feet from the entrance, where good assays of gold and silver ore are obtained. This is in the tunnel company's ground, which extends 2000 feet in that direction.

NEW MEXICO.

From the Mesilla *News* of Aug. 9th, we take the following notes:

"The mines of Hillsboro', Donna Anna County, have lately been creating considerable interest. Both quartz and placer mines are yielding very satisfactory results to their owners. The mines in this region are mostly owned by persons with not sufficient means to properly develop them, or to purchase machinery necessary, and there is, no doubt, a good opening here for economical investment of capital.

THE MINES OF LINCOLN COUNTY.

"A correspondent of this paper says of these mines that there are about 40 to 60 locations in the Sierra Capitan, Nogal, Sierra Blanco, and White Oak mountains. The most encouraging indications are encountered on the surface of these locations. In the White Oak District, close to Jicarillo, gold diggings of very rich ore are found.

"The Shakespeare Gold and Silver Mining Company, which was recently organized, is formed principally of gentlemen from New Haven, Conn. The mines of this company, of which there are five, are located not far from Mesilla. It is proposed to erect large reduction works at the earliest possible moment, and also a 20-stamp mill, and it is proposed to go into operation at an early date. A number of samples of ore taken from various depths assayed from $40 to $200 per ton. A number of gentlemen forming this company are well-known throughout the East."

TEXAS.

We are indebted to the San Antonio *Sun* for the month of September for the following items: "Immense bodies of fine bituminous coal have been discovered 145 miles west of this place, near the Rio Grande. The interest in mining in Llano County is growing rapidly, and some very fine silver-bearing lodes have recently been discovered. The Brown mine, worked by private parties here, is said to be very successful, turning out a large quantity of base bullion." The same paper observes that "a very rich field of silver has been discovered in the State of Coahuila, directly over the border. The vein is said to be 21 varas (Mexican yards) wide, and extraordinarily rich. There is a perfect exodus from all parts of Mexico to this new discovery. In Montague County several veins of excellent copper and silver have been found. Specimens sent to the Government Assay Office, assayed very high."

The San Antonio *Express* recently published a very concise and exhaustive description of the mineral lands of West Texas. A mountainous section, taking in the entire county of Llano and portions of Burnett, Blanco, Gillespie, Mason, and San Saba counties, are described as very rich, immense beds of quartz cropping out, which have in some instances been traced for miles. In the Cape Brown silver mine, ore was produced, specimens running $2000 per ton. The Lawrence Miller mine has also yielded fine ore, and an Eastern company has made overtures for its purchase, agreeing to put in $300,000 worth of machinery. An assay of galena ore from the McGehee mine gave very high results.

UTAH.

The gold fields of the Bingham Mining District are said to be full of promise. The Salt Lake *Tribune* says: "There are large bodies of ore in this district, averaging from $1800 to $2500 to the ton in gold and silver, in the proportion, say of three fifths gold to two fifths silver in value." The ore is honeycombed and easily crushed. The presumption that the accumulating tailings in Bingham could be utilized with good profits by proper machinery and improved processes is warranted. What is wanted is capital to develop the mines."

A vein of coal was discovered recently between Tecoma and Lucin, Elko County. A shaft was sunk about thirty feet, when a solid vein of good coal, said to be thirteen feet thick, was struck.

NEW PATENTS.

The following is a list of the new inventions relating to Iron, Coal, Mining Machinery, Chemical Apparatus, and the treating of Precious Metals, etc., from *The Official Gazette of the United States Patent Office*, for the week ending August 12th, 1879:

No. of Patent.	Title of Invention.	Name of Inventor.	Residence.
218,362	Telephone and Microphone Switch	Charles Anderson (a)	Cincinnati, O.
218,374	Mining-Drill	Robert O. Fishburn	Hazleton, Pa.
218,375	Electric Lamp	Jim Billings Fuller (b)	New York City.
218,397	Vertical Steam-Boiler	Vaughan Pendret (c)	London, Eng.
218,399	Stop-Valve	Edward C. Post	Monroe, Mich.
218,405	Lining of Cupola, Reverberatory, Bessemer, and other Furnaces used in the Manufacture of Steel	George J. Snelus (d)	Workington, Eng.
218,427	Dredging-Machine Shovel	James Canan	Allanburg, Ont., Canada.
218,432	Tramway	Charles A. Edge	Birmingham, Eng.
218,441	Centrifugal Machine	Samuel S. Hepworth	Yonkers, N. Y.
218,445	Mining-Machine	Sanford F. Lechner	Rose Township, O.
218,446	Feed-water Heater and Condenser for Steam-Boilers	Reese Llewellyn	San Francisco, Cal.
218,473	Reproducing Objects by Electricity	Robert Barrie	Chelsea, Mass.
218,476	Combined Gas and Vapor Stove	William Bliesner	St. Louis, Mo.
218,489	Muffle-Furnace	James R. Clark (e)	San Francisco, Cal.
218,501	Valve for Steam-Pumps	George W. Dixon	Spring Lake, Mich.
218,510	Injector for Steam-Boilers	David Fergus	Philadelphia, Pa.
218,514	Steam-Pump	John Gates	Portland, Oregon.
218,520	Magneto-Electric Machine	Zénobe T. Gramme	Paris, France.
218,521	Steam-Generator	Charles M. Grannis (f)	Morrisville, N. Y.
218,523	Valve	Frederick Grinnel	Providence, R. I.
218,528	Compound Steam-Engine	Moses B. Harvey	Leavenworth, Kan.
218,537	Revolving Ore-Separator	Herbert F. Kennedy	St. Louis, Mo.
218,541	Apparatus for Regulating the Supply of Steam to Steam-Engines	John E. C. Koch	South Kensington, England.
218,547	Portable Boiler	Thomas McBride	Philadelphia, Pa.
218,550	Tramway-Rail-Fastening	Henry T. McNeale	London, Eng.
218,559	Permanent Way for Tramways	Silas Nichols	St. Clement Danes, England.
218,569	Pump	William J. Pirkle	Cumming, Ga.
218,573	Aërial Ship	Watson F. Quinby	Wilmington, Del.
218,582	Electric Telephone	Sidney H. Short	Columbus, O.
218,585	Apparatus for the Manufacture of Gas	William Smith	Pittsburg, Pa.

(a) Assignor to Post & Co.
(b) Assignor to Fuller Electric Company, New York City.
(c) Assignor to George H. Christy, Pittsburg, Pa.
(d) Assignor to Edward Cooper and Abram S. Hewitt, New York City.
(e) Assignor of half his right to Frederick C. L. Kurre, San Francisco, Cal.
(f) Assignor of half his right to Jacob A. Gaul, Morrisville, N. Y.

PROPOSALS.

For the benefit of many of our readers, we compile weekly such proposals and solicitations for contracts, etc., as may be of interest. The table indicates the character of proposals wanted, the full name and address of parties soliciting, and the latest date at which they will be received:

Improvement of Wilmington Harbor, Delaware; J. N. Macomb, 1619 Chestnut street, Philadelphia	Aug. 25, 1879.
Safes and Vaults; James G. Hill, Treasury Department, Washington, D. C.	" 25, "
Jetties in Harbor of Charleston; Q. A. Gillmore, Army Building, New York	" 26, "
Hospital, Kankakee, Ill.; H. C. Clarke, same place	" 26, "
Dredging, Newport, R. I.; G. K. Warren, Newport, R. I.	" 26, "
Improvement of Schuylkill River, Pennsylvania; J. N. Macomb, 1619 Chestnut street, Philadelphia	" 26, "
Improvement of Mispillion Creek, Delaware; J. N. Macomb, 1619 Chestnut street, Philadelphia	" 26, "
Improvement of Cohansey Creek, N. J.; J. N. Macomb, 1619 Chestnut street, Philadelphia	" 26, "
Dredging at Wood's Hole Harbor, Mass.; Providence River, R. I.; Little Narragansett Bay, R. I. and Conn.; Rip-Rap Granite for Hyannis Breakwater, Hyannis, Mass.; Removing Boulders at Wood's Hole, Mass.; G. K. Warren, Lieut.-Col. Eng., Newport, R. I.	" 26, "
Improvement of Rivers and Harbors in Maine, New Hampshire, and Massachusetts; George Thom, Lieut.-Col. of Eng., U. S. Eng. Office, Portland, Me.	" 26, "
Iron Bridge over Hudson River at Lansingburg, N. Y.; Cohoes & Lansingburg Bridge Co. Waterford, N. Y.	" 26, "
Locks, Hinges, etc., to be delivered at League Island, free of charge; J. S. Cunningham, Pay Director U. S. Navy, 425 Chestnut street, Philadelphia	" 27, "
Improvement of Delaware River, at Mifflin Bar; J. N. Macomb, 1619 Chestnut street, Philadelphia	" 27, "
Improvement of Grand Marais, Minnesota Harbor; Charles J. Allen, Captain of Engineers, St. Paul, Minn	" 27, "
Constructing Dams on several places of the Mississippi River; A. Mackenzie, Rockland, Ill.	" 27, "
Dredging Rip-Rap Granite, New London, Conn.; J. W. Barlow, same place	" 28, "
Harbor Improvements, at Milwaukee, Racine, and Kenosha Harbors, Wisconsin; D. C. Houston, Maj. Eng., 433 Broadway, Milwaukee, Wis.	" 28, "
Harbor Improvements, Calumet Harbor, Ill.; G. J. Lydecker, Capt. Eng., 25 Honore Building, Chicago, Ill.	" 28, "
Improvement of Elizabeth River, N. J.; J. N. Macomb, 1619 Chestnut street, Philadelphia	" 29, "
Improvement of Rahway River, N. J.; J. N. Macomb, 1619 Chestnut street, Philadelphia	" 29, "
Improvement of Shrewsbury River, N. J.; J. N. Macomb, 1619 Chestnut street, Philadelphia	" 29, "
Pier at Harsimus Cove; W. H. Brown, Eng. of Maintenance of Way Pennsylvania RR. Co., Philadelphia	" 30, "
Harbor Improvement at Menominee, Michigan, and Wisconsin; Henry M. Robert, Corps of Eng., 427 Milwaukee street, Milwaukee, Wis.	" 30, "
Iron Work and Slate Floor Slabs, for U. S. Patent-Office Building; Adolf Cluss, Architect, G street, between Eighth and Ninth streets, N. W., Washington, D. C.	" 30, "
Dredging at Queenstown, Md.; William P. Craighill, 70 Saratoga street, Baltimore, Md.	" 30, "
Dredging at Onancock, Va.; William P. Craighill, 70 Saratoga street, Baltimore, Md.	" 30, "
Grading Streets of Columbus, Ohio; T. N. Gulick, City Civil Engineer, Columbus, Ohio	Sept. 1, "
Paper, Legal Cap, etc.; Hans B. Warner, Secretary of State of Wisconsin	" 3, "
Quartermaster's Stores, Jeffersonville, Ind.; James A. Ekin, Deputy Quartermaster-General, U.S.A.	" 3, "
Light Houses and Pier, Du Pont's Powder Wharf, Delaware River; Brevet Brigadier-General W. F. Reynolds, Engineer, 4th L. H. District, Philadelphia	" 4, "
Improvement of Cape Fear River, North Carolina; William P. Craighill, 70 Saratoga street, Baltimore, Md.	" 6, "
Improvement of James River, Virginia; William P. Craighill, 70 Saratoga street, Baltimore, Md.	" 6, "
Dredging at Washington Harbor, D. C.; Mount Vernon, Va.; Breton Bay, Md.; Urbana Creek, Va.; S. T. Albert, United States Civil Engineer, 1907 Pennsylvania avenue, Washington, D. C.	" 10, "
Metal Work for Light-House, at Cape Henry, Va.; O. E. Babcock, Major of Engineers, U.S.A., Light-House Engineer, Fifth District, Baltimore, Md.	" 10, "
Extending Coal Dock at David's Island, New York Harbor; John Simpson, Captain and Assistant Quartermaster, U.S.A., David's Island, New York Harbor	" 10, "
Pier at Ashtabula Harbor, O.; John M. Wilson, Cleveland, O.	" 16, "
Piers at Port Clinton Harbor, O.; John M. Wilson, Cleveland, O.	" 16, "
Subsistence, Lumber, Iron, etc.; O. H. Baxter, Colorado State Penitentiary, Cañon City, Colorado	" 17, "
100,000 tons of Steel Rails to be Manufactured in New Zealand; John Knowles, Under-Secretary for Public Works, Wellington, New Zealand	" 30, "
Grain Elevator, 350,000 bushels capacity, to be delivered free of charge at Parana River, Rosario, Argentine Republic, S. A.; Henry B. Coffin, Irving House, Twelfth street and Broadway, N. Y.	

STATISTICS OF COAL PRODUCTION.

This is the only Report published that gives full and accurate returns of the production of our Anthracite mines.

Comparative statement for the week ending Aug. 16th, and years from January 1st:

TONS OF 2240 LBS.	1879. Week.	1879. Year.	1878. Week.	1878. Year.
Wyoming Region.				
D. & H. Canal Co..	74,632	2,003,568	62,178	1,264,195
D. L. & W. RR. Co.	82,039	2,236,872	53,853	1,228,449
Penn. Coal Co.....	29,378	871,185	19,115	484,119
L. V. RR. Co.....	19,308	602,303	21,998	489,969
P. & N. Y. RR. Co..	983	20,170	1,057	18,397
C. RR. of N. J.....	39,710	1,135,626	24,475	566,010
Penn. Canal Co.....	17,667	212,288	12,321	194,080
	263,717	7,115,012	193,997	4,245,219
Lehigh Region.				
L. V. RR. Co.....	57,019	1,958,906	67,442	1,484,807
C. RR. of N. J.....	36,975	1,250,148	40,439	790,054
S. H. & W. B. RR..	692	16,759	667	16,702
	94,686	3,225,813	108,548	2,291,563
Schuylkill Region.				
P. & R. RR. Co....	138,296	4,466,951	143,990	2,780,906
Shamokin & Lykens Val.....	20,533	536,845	28,335	328,497
	158,829	5,003,796	172,325	3,118,403
Sullivan Region.				
Sul. & Erie RR. Co.	413	30,107	151	19,212
Total	517,645	15,374,728	475,021	9,674,397
Increase.....	42,624	5,700,331	.....	.....
Decrease	.....	.....	.....	.....

Total same time in 1877 .....11,941,868 tons.
" " " " 1876..... 9,349,490 "
" " " " 1875..... 9,832,195 "
" " " " 1874..... .....11,646,111 "

The above table does not include the amount of coal consumed and sold at the mines, which is about five per cent of the whole production.

Belvidere Delaware Railroad Report for week ending Aug. 16th:

	Week.	Year. 1879.	Year 1878.
Coal for shipment at Coal Port (Trenton)	345	7,370	4,406
Coal for shipment at South Amboy	9,353	287,859	307,666
Coal for distribution.....	5,312	192,988	103,996
Coal for Company's use	1,056	54,750	48,767

Receipts and shipments of coal at Chicago, Ill., for the week ending Aug. 16th, and year from January 1st:

	Week. Tons.	Year. Tons.
Receipts.....	60,118	1,344,776
Shipments.....	7,811	200,511

The increase of shipments of Cumberland Coal over the Cumberland Branch, and Cumberland and Pennsylvania railroads, amounts to 100,086 tons, as compared with the corresponding period in 1878.

The Exports of Coal from Baltimore for the week ending Aug. 15th were .... tons, and since January 1st, 19,302 tons, as against 21,416 tons for the corresponding period in 1878.

Coals Cleared on the Canals of the State of New York from Aug. 1st to Aug. 14th, inclusive:

Tons of 2000 lbs.	1879.	1878.
Anthracite.....	17,334	22,106
Bituminous.	5,031	8,707
Totals.....	22,365	30,813

The Production of Bituminous Coal for the week ending Aug. 16th was as follows:

Tons of 2000 lbs., unless otherwise designated.

	Week. Tons.	Year. Tons.
Cumberland Region, Md.		
Tons of 2240 lb	45,974	1,003,513
Barclay Region, Pa.		
Barclay R. R., tons of 2,240 lbs.....	5,668	205,782
Broad Top Region, Pa.		
Huntingdon and Broad Top R. R.....	2,760	85,557
*East Broad Top.....	318	39,666
Clearfield Region, Pa.		
*Snow Shoe.....	835	42,064
*Tyrone and Clearfield..... 33,420		915,291
Alleghany Region, Pa.		
*Pennsylvania R. R	3,478	115,920
Pittsburg Region, Pa.		
*West Penn R. R.....	3,994	123,165
*Southwest Penn. R. R..... .	499	23,816
* Penn & Westmoreland gas coal, Pa. R. R.....	14,544	469,262
*Pennsylvania R. R.....	12,412	287,939

*For the week ending Aug. 14th.

The Production of Coke for the week ending Aug. 14th:

Tons of 2000 lbs.	Week	Year.
Penn. R. R. (Allegheny Region).....	1,419	30,611
West Penn. R. R.....	897	58,381
Southwest Penn. R. R..... 19,778		581,462
Penn. & Westmoreland Region, Pa. R. R.		56,606
Pittsburg, Penn. R. R.....	4,229	102,870
Total... ... .26,323		829,930

THE COAL TRADE REVIEW.

NEW YORK, Friday Evening, August 22, 1879.

Anthracite.

A much duller state of business has seldom been seen in the coal trade, and certainly there has never been a more unpromising outlook. Coal is being offered in abundance at the average of the last auction sale, and should the production be kept up, the necessities of some of the producers will bring about still lower prices. It is estimated that there are in first hands nearly 1,000,000 tons of coal; yet while some of the companies have filled all stocking ground, and have "miles of cars" loaded, the Reading Company has but a very small amount of coal on hand. The low prices are causing some of the individual operators to suspend mining; but otherwise, there are no indications of decreasing the product. It is well demonstrated that low prices will not find a market for so much coal. It is a matter of storage-room, or the ability to pay for the coal. It, therefore, becomes necessary that a suspension of mining by some, if not all the companies, should be brought about by some means.

The stock of coal on hand represents a fortnight's production, so it will require fully a month's suspension to put the market in even fair shape. Without this, the companies must lose more money during the last four months of this year than during any previous six months.

Instead of a suspension of coal-mining and better prices, the following press dispatch received from Philadelphia yesterday indicates quite the reverse:

"Messrs. Cole, Graeff, Johns, Audenreid, Osler, Heaton, Patterson, Donaldson, Omrod, Borda, Hecksher, and other prominent coal-operators in the Schuylkill region, called upon President Gowen, of the Philadelphia & Reading Railroad, to-day, and had a conference with him in relation to a proposed stoppage of work in September, and upon the question of tolls. Several members of the party strongly urged a suspension of two weeks, but Mr. Gowen asserted that such action would not be advantageous, and gave his reasons for his position. He assured them that he would make no reduction of tolls for the line and city trade. Local trade is dull, but the Eastern market takes its full supply, and there are on hand at Port Richmond 50,000 tons of all grades, about one half of which is chestnut. The general opinion is, that no conclusion affecting suspension will be arrived at."

From this, it is to be inferred that the Reading Company does not intend to suspend mining, and that should it be necessary to keep up a full tonnage, a reduction of tolls will be made upon coal for shipment to the New York and Eastern markets. As the Reading Company has been enabled to move, not only its own coal, but a large quantity of that of other companies, it is in a manner justified in continuing to produce. The secret of the low prices for coal is not so much the result of natural competition as of the ambition, envy, and malice of the various managements. The officers draw their salaries with great regularity, and should the companies' credit and the stockholders' money be squandered, some of them would undoubtedly put themselves on the "short" side of the stocks before letting the companies go into the hands of receivers, and thereby make the equivalent of several years' additional salary. We do not intend to say that this applies to all of the managers, but it looks as though some have only their personal interests in view.

The dog-in-the-manger policy predominates in the management of the coal business. For a time, those with inferior advantages of location, availability, and quality of coal, may stand as a terror over those with superior advantages; but the law of the "survival of the fittest" will certainly obtain in this case, and it will not become a question of the amount of indebtedness.

The production of anthracite coal last week was 499,978 tons, as compared with 540,716 tons the previous week, and 475,021 tons for the corresponding week of 1878. The total production from January 1st to August 16th was 15,343,223 tons, as against 9,674,397 tons for the like period of last year, showing an increase this year of 5,668,826 tons.

The Delaware, Lackawanna & Western Railroad Company announces 50,000 tons of coal to be sold at auction next Wednesday. The announcement was not made at the usual time in the month, but was withheld until after a consultation with Mr. Gowen, of the Reading Company, to-day.

Our Philadelphia correspondent writes as follows, under date of August 21st:

"The trade remains very dull. Consumers are not buying, and dealers with a good supply on hand can afford to wait the action of the large companies. A few days will decide whether the production will be curtailed by a stoppage of a few weeks, which would strengthen the market very much, or the production go on and prices remain ruinously low. In the absence of orders, freights are very weak—$1 to Boston and Portland being readily taken."

Bituminous.

There is but very little important business doing in this coal. Prices appear to be following rapidly in the path of anthracite coal. We hear of as low as $2.35 per ton, f. o. b. Georgetown, for Cumberland coal. This price should give this coal a fair chance in the Eastern markets, and should develop a West India or South American trade.

San Francisco. Aug. 14, 1879.

COAL.—Imports from January 1st to July 1st:

	Tons.		Tons.
Anthracite.....	7,794	Cumberland.....	1,587
Australian.....	25,213	English.....	6,152
Coos Bay.....	26,602	Seattle.....	85,386
Carbondale	746	Tacoma.....	845
Carmel Bay.....	350	Vancouver Isl'd....	88,220

The miners' strike at Seattle, W. T., still continues, with little prospect of immediate cessation thereof. Of course this makes a very material reduction in our every-day coal supply, and is the immediate occasion of a decided advance in the Sydney steam coals, and of which the spot supply is light. Arrivals during the week embrace the following cargoes: From British Columbia, Revere, with 1240 tons Wellington; Victoria, 1670 tons Nanaimo; Australian, per Eva H. Fish, 694 tons Wallsend; Brier Holme, 1260 tons same; Bark Rebecca, from Sydney, with 752 tons Shale; Coos Bay, Arcata, 350 tons, and Clara, 252 tons same. The St. David, from New York, brought 498 tons. We note sale of 694 tons Wallsend, per Eva H. Fish, at $7.25.—*Commercial Herald.*

Pittsburg. Aug. 21, 1879.

COAL.—There has been no movement of consequence in this business since the large delivery of coal by the late flood and the return of empty barges to be in readiness to take in fresh cargoes at the mines. At present, these boats are prevented by the unfinished repairs on the lock of the second dam from ascending to the pools above, where by far the largest number of collieries are situated. The mines on the first pool are the only ones now being worked—there are but five of them. On the second pool, there are 25 collieries; on the third, 15, and on the fourth, 22. In none of these can any mining be done until the second dam is repaired, so that the empty barges can be floated up to receive the coal at the respective works. It is expected that the repair will be finished, and the lock ready for use within the current week. The lower markets are now stocked with Pittsburg coal for three months, and the prices given in the quotations below are likely to continue at least sixty days unless there should in the mean time come a rise of the waters, and occasion another run to over-supply the demand. Heavy westerly rains last week raised the lower Ohio and enabled boats laden with over a million bushels (40,000 tons) of coal to pass through the Louisville Canal bound for St. Louis; and also a tow or two for New Orleans. As yet there has been no expressed discontent among the miners with the pay offered by the operators of 2½ cents a bushel (65 cents a ton), and it is probable that that will be the settled price for mining during the present season. The annexed quotations are the regular rates last ascertained.

PRICES AT PITTSBURG.

Wholesale, on board. 4 cts. per bushel, $1.06 per ton
Retail, delivered. ....6@ 7 " " 1.85 "

AT CINCINNATI.

Wholesale, on board..... 8 cts. per bushel, $2.12 per ton
Retail, delivered.....10 " " 2.65 "

AT LOUISVILLE.

Wholesale, on board..... 8 cts. per bushel, $2.12 per ton
Retail, delivered..... ..11 " " 2.92 "

AT NEW ORLEANS.

Wholesale, on board.....50 cts. per barrel, $4.83 per ton
Retail, delivered.....65 " " 6.28 "

Bushels are rated among dealers here at 76 lbs.; 26⅓ bushels make a ton of 2000 lbs., nearly.

The barrel that rules the coal measurement in New Orleans contains 2 4-7 bushels of 80 lbs. each, making about 200 lbs. Nine and two thirds of these barrels weigh a ton, within a small fraction.

COKE.—The awakening in this business has not as yet increased, but only strengthened prices. Nor has the consumption as yet been greatly enlarged—remaining as it has been several weeks, steadily 5000 tons a day, or 30,000 tons a week. But the signs of the future are auspicious of a rapidly-growing demand, already manifested in accumulating inquiries and dispositions to contract. These indications have enlisted several parties in the construction of some 1000 new ovens, which will add about 8000 tons to the weekly production of the region. Prices still range at from $1.20@$1.30 per ton of 2000 lbs. on board cars at the ovens. We extract the following from a communication in the *Dispatch* on this coke region:

"The number of ovens now in operation in this district is about 3600. For convenience sake, I will arrange them according to the lines of railway on which they are located. Between Uniontown and Connellsville, on both the Baltimore & Ohio and Southwest Pennsylvania railroads, the names of the works, the operators, and the number of ovens are as follows:

Works.	Operators.	Ovens.
Lemont Furnace Co.....	...Lemont Furnace Co.....	102
Percy Mining Co.....	.Percy Mining Co.....	30
Mt. Braddock.....	.....Colvin & Torrence.....	127
Ferguson.....	.....H. C. Frick & Co.....	70
Dunbar Furnace Co.....	.Dunbar Furnace Co.....	89
Mahoning.....	.....Brown, Bonnell & Co.....	100
Anchor.....	.....H. C. Frick & Co.....	100
Uniondale.....	.....Reid Brothers.....	76
Connellsville Gas-Coal Co.....		99
Total.....		793

"On the Southwest Railroad, from Connellsville to Tarr's Station, the list is as follows:

Works.	Operators.	Ovens.
Davidson.....	P. & C. G. C. Co.....	253
Sowbelly.....	Zack & Henry.....	40
Perryville.....	A. H. Sherrick.....	70
Valley.....	H. C. Frick & Co.....	102
Howe.....	Sherrick, Rice & Co.....	20
Enterprise.....	Dillinger & Sutton.....	40
Stonerville	Stoner, Hitchman & Co.....	30
Tarr's.....	Warden & Co.....	16
Total.....		571

"On the Baltimore & Ohio Railroad, from Connellsville west:

Works.	Operators.	Ovens.
Henry Clay.....	H. C. Frick & Co.....	100
Washington.....	H. C. Frick & Co.....	35
.....	Laughlin & Co.....	116
Sterling.....	Brown & Co.....	60
Jimtown	Brown & Co.....	282
Jackson.....	Cochran & Keister.....	100
Total.....		693

"On the Mt. Pleasant Branch Railroad, from Bradford to Mt. Pleasant:

Works.	Operators.	Ovens.
Novelty	H. C. Frick & Co	101
Morgan	"	111
Foundry	"	44
Eagle	"	80
Summit	"	100
Globe	A. A. Hutchinson & Brother	100
Tiptop	H. C. Frick & Co	56
Scottdale	Charlotte Furnace Co	66
Fountain	H. C. Frick & Co	50
Dexter	J. R. Stouffer	40
Painter	Israel Painter	70
Wooden	Dr. H. G. Lomison	32
West Overton	H. C. Overholt & Co	62
Rising Sun	Sherrick & Markle	70
Emma	M. F. Overholt	30
Buckeye	John M. Cochran	100
———	B. F. Coughanour	20
———	Boyle & Hazlett	182
Mullen	H. C. Frick & Co	60
Standard	A. A. Hutchinson & Brother	116
Total		1,490
Grand total		3,547

—*American Manufacturer.*

FREIGHTS.

Coastwise Freights.

Per ton of 2240 lbs.

Representing the latest actual charters to Aug. 22d, 1879.

PORTS.	From Philadelphia.	From Baltimore.	From Elizabethport, Fort Johnson, South Amboy, Hoboken and Weehawken.
Alexandria	55@75		
Apponang	1.12		
Augusta, Me			
Baltimore	50		
Bangor			
Bath, Me	1.20@1.25		1.10
Beverly			1.10
Boston, Mass	1.15@1.20		1.10
Braintree	1.10‡		1.10
Bridgeport, Conn			
Brooklyn			
Burlington			
Cambridge, Mass	1.15		1.10
Camoridgeport	1.15		1.10
Charleston			
Charlestown	1.25		
Chestertown			
City Point			1.00
Coosaw, S. C	1.25		
Damascotton			80
Danversport			
East Cambridge			
E. Gr'nwich, R. I			
Fall River			85
Georgetown	55@75		
Hingham			
Keyport			
Lambertville	30		
Lynn			
Medford			
Millville			
Milton	1.15@1.20		
Mystic River			
New Bedford	1.10@1.15		
Newburyport			
New Haven			55
New London	1.15		
Newport	1.10@1.15		80
New York	80@85†		35
Norfolk, Va			
Norwich			
Norwalk, Conn			
Pawtucket	1.20@1.25		85
Petersburg	85@80		
Plymouth			
Portland			
Portsmouth, Va			
Portsmouth, N.H.	1.25		1.15
Providence	1.05@1.10		
Provincetown			1.10
Quincy Point	1.20		1.15
Richmond, Va	75@80		
Rockland			1.10
Rockport			
Roxbury			
Saco	1.55		
Sag Harbor			85
Salem, Mass	1.30@1.45		1.10
Saugus	1.35@1.47½		1.00
Savannah			
Somerset			
St. John, N. B.	1.10		
Stamford	85		
Staten Island	81		
Thomaston			
Trenton	15@37c.		
Troy			
Wareham			
Washington	50@75		
Weymouth	1.25		
W'lmington, N.C.			

* And discharging and towing. † And discharging. ‡ And towing. § 3 cents per bridge extra. ‖ Alongside. ¶ And towing up and down.

METALS.

NEW YORK, Friday Evening, August 22, 1879.

There is still considerable activity in the metal market, and the outlook continues to be very favorable.

Copper.—... we pr...ted, a large business has taken place in Lake Superior copper. The estimates range from 6,000,000 to 10,000,000 lbs., at 16c. to manufacturers. There is no talk of an export business. This large business has had no effect on prices, 16½c. being asked, and 16¼c. taken.

London advices of August 8th say:

"There was very little metal offering to-day in the Chili bar market, and sales were therefore on a moderate scale, owing to the high rates demanded by the holders. We hear of about 100 tons G. O. Bs. at £53¼ to £53⅜, but at the lower figure some rather large orders had to be returned unexecuted, while even at the top rate the supply was exceedingly limited. There are buyers of favorite marks at £53¾, cash, and a small quantity obtainable at £54; some 50 tons, for distant arrival, were disposed of at £54¼. Best marks are quoted at £54¼@£54½, with purchasers at the lower price. Wallaroo sold to a moderate extent at £61@£61½, and owners now ask the top value. Burra Cake is wanted at £60¼, and nothing obtainable below £60½@£61. English steady but unchanged. Tough Cake, £58@£59; Select, £59@£60; India Sheets, £63@£63½; other Sheets, £63½@£64½; Y metal sheets, 5⅛@5⅜ ₱ lb."

Tin.—Sales of about 800 tons are reported, although some of this was sold previously and only came to light this week. The actual sales of the week do not amount to more than 150 to 200 tons. The market for Straits closes strong at 15¾c. for large lots, and 15⅞@16c. for jobbing lots. L. & F. is quoted at 15⅛c. and Banca at 17⅛@18c. Cable advices quote Straits at £68 10s. at London, and $20.80 at Singapore, with exchange at 3s. 9⅝d. L. & F. is quoted in London at £70.

Messrs. Vivian, Younger & Bond, of London, under date of August 8th, say of tin:

"At the Dutch Trading Company's sale in Amsterdam, on the 30th ult., 23,296 slabs Banca sold at an average of 38⅛fl., equal to £64 5s. in Holland. The course of the market here would appear to have been inconsistent with the enormous deliveries from stocks, having been dull and drooping, with a restricted business. Foreign has declined from 64s. 9d. to 64s. 3d., and English sluggish throughout at about 63s. 6d.

"The July shipments of Straits were 190 tons, and from Australia estimates come of from 575 to 700 tons.

"Deliveries of foreign from London, 1130 tons; from Holland, 680 tons.

"The stock of foreign tin in London and Holland is thus estimated:

	1879. July 1st. Tons.	1879. Aug. 1st. Tons.	1878. Aug. 1st. Tons.
Foreign tin in London	10,488	10,566	10,053
Banca tin in Holland	1,554	1,944	1,525
" (in the Company's hands)	1,265	688	902
Billiton tin in Holland	1,989	1,845	1,695
	15,296	15,043	14,175
Quantity of tin afloat for Europe	3,400	2,900	3,500
Quotations on the same dates being for Straits	£65 10s.	£64 5s.	£61 5s.

Tin Plates.—The English market has a strong upward tendency owing to an expected strike on the 1st prox. There has been a very good business here, with no change in prices. We quote charcoal tins, IX, Melyn grade, at $6.25@$6.37½, and Allaway, $5.75@$5.87½; charcoal roofing, Dean and S. T. P., at $5.75, and ordinary Allaway, $5.37½; coke tins, $5.25@$5.37½, and roofing, $5.

Messrs. Robert Crooks & Co., of Liverpool, under date of August 7th, say of tin and terne plates:

"Apparently, production has quite overcome consumption, for, with a largely-increased business, prices have steadily diminished. During the last few days, the tin-plate masters have given their men formal notice of a reduction in wages, and this being considered likely to lead to a strike, the market has somewhat stiffened."

Lead.—Sales amounting to about 200 tons at 4⅛c. and a shade less are reported. We quote at 4⅛c.

Messrs. Vivian, Younger & Bond, say of the London market for lead:

"There has been more steadiness in the market lately, partly owing to the apprehension of an American supply being removed; the price there is now about £19 per ton. English in fair demand, at from £13 10s. to £13 15s. Soft Spanish, £13 5s. to £13 7s. 6d., and with silver £13 to £13 7s. 6d., as in quality."

The exports of lead from London and Liverpool to the East for the first seven months of 1877, 1878, and 1879, were as follows:

	1877. Tons.	1878. Tons.	1879. Tons.
To Madras	....	100	66
" Calcutta	59	452	250
" Bombay	94	146	359
" China	8,860	6,760	4,144
" Japan	754	823	351
" Singapore and Penang	135	90	91
	9,911	8,371	5,261

The shipments for the first seven months of this year show a falling off of 4650 and 3110 tons for the same periods in 1877 and 1878, respectively. In two years, the shipments to China and Japan show a falling off of over one half.

The San Francisco *Commercial Herald* of August 14th notes the shipment of 200,470 lbs. pig-lead from that city to New York by the St. Nicholas. It has been a long time since the previous shipment was announced.

Spelter and Zinc.—There is a fair business doing, and prices continue to advance, closing at 5½@5¾c. asked. Sheet zinc is very scarce, and is held at 6½c.

A Foreign Zinc Combination.—Foreign advices are as follows:

"The most important zinc-producers of Germany have formed a syndicate, controlling over one half of the entire zinc production of Europe, and it is expected that prices will advance to a parity of at least 6c. here in New York. The syndicate is to remain in force until the end of 1880."

Messrs. Vivian, Younger & Bond say of the London market for spelter:

"This article, after many months of falling prices, much assisted by persistent 'bear' sales, forced upon unwilling consumers, has at length turned round, it is said, to the confusion of the operators. From £13 15s. for ordinary brands of foreign, prices have advanced to £16 15s., with comparatively few transactions on this side, the stocks being inconsiderable. It is stated that the foreign producers have fixed their prices at equal to £17 15s. net, delivered at outports, as a minimum until next spring."

Antimony is dull, and quoted as follows: Cookson's 12c., and Hallett's 11¾c.

Quicksilver.—The San Francisco *Commercial Herald* of August 14th says: "The spot supply is light, and the export demand active, with considerable sales for China and elsewhere at 35c. The market is firm, with a rising tendency. Receipts for the week, 1645 flasks."

Our monthly receipts are as follows:

Month.	1878. Flasks.	1879. Flasks.
January	4,290	5,631
February	2,686	5,147
March	2,762	5,127
April	5,375	5,400
May	5,738	5,888
June	5,956	6,437
July	5,116	6,222
Totals	31,923	39,852

Our exports by sea for July, 1879, are as follows:

To	1879. Flasks.	1879. Value.
China	4,708	$126,977
Mexico	2,480	67,446
Victoria	3	83
South America	240	6,144
Australia	50	1,282
Japan	100	2,600
New Zealand	10	256
Central America	6	175
Totals	7,597	$204,963
Prev. since January 1st	27,503	804,736
Totals since January 1st	35,100	$1,009,699
Same period 1878	18,097	603,639
Increase this year	17,003	$406,060

IRON MARKET REVIEW.

NEW YORK, Friday Evening, August 22, 1879.

American Pig.—There is still a very good business, and prices are very firm. Furnaces are continually going into blast and preparing to do so, until there is a fear that the production must soon exceed the demand. The more conservative have not been eager to see the prices advance too rapidly, knowing that each dollar advance furnished to some idle furnace the hopes of again making a profit. If all the furnaces in the country were to be blown in, there would certainly be an excessive production, and there is no question but that the number which can profitably be in blast is considerably below the total. To those who contemplate blowing in furnaces that are now idle, we recommend a careful study of the statistics of previous production and consumption and the present productive capacity. We are reported sales of 1500 tons of Crane iron for delivery next year, at prices current at that time; 600 tons of No. 1 at $22; 800 tons of No. 1, in lots, at $21.50@$22, and 500 tons of No. 2 at $19@$20. In addition to the above, there has been a sale of 10,000 tons of No. 1 English Bessemer iron, and it is said that for the last three weeks there have been about 35,000 tons sold in all for shipment during the next eight or nine months. We quote No. 1 Foundry at $21@$22; No. 2 Foundry at $19@$20; and Forge, at 17@$17.50.

Scotch Pig.—We note sales of 500 tons of Eglinton and 100 tons of Summerlee to consumers, on private terms. It looks as though this business would be rather overdone, in expectation of a large rise in American iron. We quote Eglinton at $21; Coltnes, $23; and Gartsherrie, $22@$22.50.

Messrs. John E. Swan & Brothers, of Glasgow, under date of August 8th, 1879, report 90 furnaces in blast, against 96 furnaces at the same date last year. The quantity of iron in Connal & Co.'s stores was 290,023 tons, an increase of 1979 tons for the week. The shipments show a slight increase for the week, and an increase of 56,586 tons since January 1st, as compared with the same period last year. The imports of Middlesbrough iron, in the same comparison

show a falling off of 39,012 tons. No. 1 Scotch pig-iron was quoted as follows: Gartsherrie, 46s.; Coltness, 51s. 9d.; Langloan, 49s.; Summerlee, 44s. 6d.; Carnbroe, 43s.; Glengarnock, 43s. 6d.; and Eglinton, 42s. 6d. Middlesbrough iron was quoted, f. o. b., Tees, as follows: No. 1 Foundry, 36s. 9d.; No. 2, 34s. 9d.; No. 3, 33s. 3d.; No. 4, 32s. 9d; and No. 4 Forge, 32s. 3d.

Rails.—Since our last, there have been sales of 2000 tons of English iron rails and some small sales of American. About 2000 tons of Bessemer rails for next spring's delivery are reported as having been sold. There is still a very good demand. Prices are somewhat nominal. We quote iron rails at $41@$42 here, and steel at $50.

There are indications of considerable improvement in the iron and steel trades of Great Britain. The exports for the seven months ended July 31st were 1,340,756 tons, 1,326,917 and 1,434,830 tons in 1877, 1878, and 1879, respectively. The exports of railway material, however, show a falling off, being 280,855 for the first seven months of 1877, 283,966 tons in 1878, and 251,966 tons this year. A great change has taken place in the rail trade, steel taking the place of iron rails. The exports of iron rails for the first seven months of 1877 were 112,427 tons; in 1878, 86,761 tons; and this year, but 23,223 tons. The exports of steel rails were for the first seven months 126,684, 147,750, and 184,623 tons in 1877, 1878, and 1879, respectively. For that period, the exports of rails to the United States were 1037, 568, and 8957 tons during 1877, 1878, and 1879, respectively.

Old Rails.—Sales amounting to 2000 tons at $26, are reported.

Wrought Scrap.—Sales of 200 tons at $26, and 300 tons on private terms, are reported.

Baltimore. Aug. 18, 1879.

[Specially reported by Messrs. R. C. HOFFMAN & Co.]

Below we quote present prices for pig-iron and blooms, with active demand and prices advancing.

Balt. Char....	$26.00@$29.00	M. & White...	$16.00@$17.00
Va. "	27.00@ 30.00	C'lC.B.Blooms	50.00@ 51.00
Anth.No.1....	21.00@ 22.00	" " Billetts	52.00@ 55.00
" " 2....	19.00@ 20.00	Refi'd Blooms	45.00@ 47.00
" " 3....	17.00@ 18.00		

Louisville. Aug. 19, 1879.

[Specially reported by Messrs. GEORGE H. HULL & Co.]

The market continues active and excited. Nearly every thing offered at reasonable figures is accepted. Most consumers are pretty well stocked with iron for the next four or five months, and the majority of the furnaces are largely sold ahead—many of them into next year. We advance quotations on all grades.

The usual time, four months, is allowed on the quotations below:

FOUNDRY IRONS.

	No. 1.	No. 2.
Hanging Rock Charcoal...	$22.00@$24.00	$20.00@$22.00
Southern Charcoal.....	21.00@ 22.00	20.00@ 21.00
H'n g Rock, Stc'l & Coke..	20.00@ 21.00	19.00@ 20.00
Southern Stonecoal & Coke	20.00@ 21.00	19.00@ 20.00
"Amer. Scotch"	$20.00@$21	Silver Gray.	$18.00@$19.00

MILL IRONS.

No. 1 Charcoal, Cold-short & Neutral.....	$19.00@$20.00
No. 1 Stc'l & Coke, Cold-short & Neutral....	18.50@ 19.00
No. 2 Stc'l & Coke, Cold-short & Neutral....	17.50@ 18.00
No. 1 Missouri and Indiana, Red-short.....	21.00@ 21.50
White & Mottled, Cold-short & Neutral.....	16.50@ 17.00

CAR-WHEEL AND MALLEABLE IRONS.

Hanging Rock, Cold Blast.....	$28.00@$32.00
Alabama and Georgia, Cold Blast	29.00@ 31.00
Kentucky, Cold Blast.....	28.00@ 31.00

THE BULLION MARKET.

NEW YORK, Friday Evening, August 22, 1879.

There is no change to note for the past week, and we can only report the market for silver abroad and here as very firm at current rates.

DAILY RANGE OF SILVER IN LONDON AND NEW YORK, PER OZ.

DATE.	London Pence.	N. Y. Cents.	DATE.	London Pence.	N. Y. Cents.
Aug. 16....	51¾	112¼	Aug. 20	51¾	112⅜
Aug. 18....	51 13-16	112⅜	Aug. 21	51¾@1-16	112⅜
Aug. 19....	51¾	112¾	Aug. 22	51¾	112½

Treasury Regulations Regarding Nickel and Copper Coins.—The accumulation of copper and nickel coins is frequently a source of great annoyance and inconvenience to business men, and it is not generally known that ample provision is made by the Treasury Department both for issuing and redeeming these coins. Those who desire to supply themselves with minor coins can do so under the following regulations:

1. The minor coins of the United States of the denominations of one, three, and five cents are issued and forwarded free of expense, upon application to the Superintendent of the Mint at Philadelphia, for lawful money of the United States in sums of twenty dollars ($20) or multiples thereof. Remittances may be made by money-orders or sight-drafts, to the order of said Superintendent, and payable in New York or Philadelphia.

2. The Treasurer and Assistant Treasurers are authorized to pay out, for legal tender notes, any minor coins not needed in the current business of their offices.

For the redemption of minor coins by the United States the following regulations have been adopted:

1. Coins of copper-bronze and copper-nickel may be presented in sums of twenty dollars, or multiples thereof, assorted by denominations and issues, at the Mint in Philadelphia, to the Treasurer, any Assistant Treasurer or designated depositary for redemption in lawful money.

2. A letter of advice should accompany the package, stating the amount and kind of coin and the name of the owner. Payment for the same, when counted and examined, will be made in currency, minor coin, or by check on New York, Philadelphia, Boston, New Orleans, or San Francisco, at the option of the shipper.

3. If the coins are not presented at the counter, transportation charges should be prepaid; the charge on coin in return will be paid by the mint.

4. Mutilated minor coin will not be redeemed or exchanged.

The Government Bi-Metallic Standard.—Advices at the State Department from the diplomatic representatives and special agents of the United States in Europe continue to favor the opinion that the efforts of this government to bring about a joint reconsideration by America and the leading European powers of the bi-metallic standard question, will prove successful. No positive official assurances have been received, but the indications all point to a willingness on the part of the principal European states to at least join in a full and unprejudiced discussion of the subject.

Shipments of Standard Silver Dollars.—Shipments of standard silver dollars were, on the 19th inst., ordered by the Treasurer of the United States from the mint to banks and private parties to the amount of $56,000, distributed as follows: New Jersey, $20,000; Indiana, $16,000; Pennsylvania, $11,000; Texas, $5000; Ohio, $2000; Illinois, $1000; Minnesota, $1000. On the 18th inst., the shipments were $46,000, and during the month $431,500.

On the 20th inst., the Treasury Department purchased between 400,000 and 500,000 ounces of silver bullion, all for the Philadelphia mint. The offers for the West were few, and, being considered above the market rates, were rejected. No offers were received for delivery at either the Carson or the New Orleans mint. Information has been received here that, owing to the demand in China, and the facilities afforded for and time gained in making shipments from San Francisco to that country, silver commands fully 1 cent an ounce more in San Francisco than in London. In addition to this, it is stated that when sales are made for shipment to China, payment is made in gold coin; while, on sales to the government, payment is made in standard silver dollars.

The European Gold Movement to New York.—On the 21st inst., the New York Assay Office received $850,000 worth of gold bars—$600,000 from the France and $250,000 from the Abyssinia—consigned to L. Von Hoffman & Co. The Lessing brought in addition $310,000, making $1,860,000, in all, imported this week.

PARIS, August 22.—The *Bourse* (newspaper) says: "Some amounts of gold have been shipped direct from Paris for New York. The stock of American eagles in the Bank of France is exhausted, and further shipments will be made in bars and Napoleons. Caution is, therefore, everywhere maintained, although the money offering at short dates continues to glut the market."

The French Silver Dollar.—A French dollar of a weight of 27,215 grams, and equivalent in value to the Almighty Dollar of the United States, is now being issued from the mint in Paris. It is intended for circulation in Cochin China, where the normal 5-franc pieces of the French coinage, which are nominally exactly equal to the United States dollar, have suffered depreciation in consequence of the general fall in the value of silver, and are worth, in fact, only 4½ francs, or a depreciation of 10 per cent.

BULLION SHIPMENTS.

We give below a statement showing the latest bullion shipments, in addition to those announced in our issue of August 18th, 1879:

August 4th	Standard		Cal	$38,200.87
" 4th	Mount Diablo		"	15,511.88
" 4th	Indian Queen		Nev	4,762.94
" 6th	Martin White		"	4,957.00
" 6th	Ophir		"	58,763.00
" 7th	Bodie Con		Cal	18,750.84
" 7th	Florida Hill		Idaho	3,455.00
" 8th	Alexander		Nev	8,119.37
" 10th	Hillside		"	4,500.00
" 11th	Belle Isle		"	20,000.00
" 11th	Independence		"	4,000.00
" 11th	Con. Virginia		"	40,630.70
" 12th	Richmond Con		"	10,680.97
" 12th	Grand Prize		"	5,318.00
" 13th	Horn-Silver		Utah	2,000.00
" 13th	Stormont		"	6,570.59
" 13th	Christy		"	2,783.50
" 13th	Park		"	3,085.13
" 14th	Pioneer		"	4,722.19
" 14th	Ontario		"	3,517.00
" 14th	Morgan & Kessler		"	4,550.00
" 15th	Sierra Nevada		Nev	45,374.76
" 15th	Horn-Silver		Utah	6,000.00
" 15th	Stormont		"	5,000.00
" 16th	California		Nev	47,814.69
" 16th	Northern Belle		"	3,955.29

The bullion yield of the Ophir mine for July was $168,590.72. The yield of the Sierra Nevada for the same month was about $80,000.

The Ute and Ule, of San Juan, Colo., are turning out 25 tons per day. It is anticipated to increase the yield to 30 tons, and by September 1st to 40 tons per day.

The Stonewall Jackson mine, Arizona, produced $28,042 in June and July.

The Malta (Leadville) Smelting Works are using 40 tons of ore per day.

The July product of the Ontario mine was $114,286. The mill was stopped ten days and a half for repairs, and the production from August 1st to August 14th, was $61,201, assay value.

The Eureka District Bullion Product.—For the quarter ending June 30th, 26,862 tons of ore were reduced in this district, which yielded $878,825; the expense of extracting, transporting, and reducing the same was $653,393, leaving a net yield of $245,874, the tax on which amounted to $4202. Of the above, the Richmond reduced 985 tons, valued at $352,145; expenses, $276,564; profit, $76,581. Eureka Consolidated reduced 15,414 tons, worth $454,590, at a cost of $289,049; net yield, $165,540. The balance came from about thirty outside mines.

Bodie Bullion Shipments.—The *Standard* says:

"From the 1st of January to the 1st of August, seven months, the bullion shipments of this district compare with last year as follows:

	1878.	1879.
January.....	$111,567.97	$197,921.16
February.....	84,473.50	136,714.44
March.....	78,449.77	189,403.76
April.....	76,619.33	208,592.14
May.....	62,026.15	161,223.83
June.....	85,912.84	285,093.74
July.....	110,075.79	170,599.63
Total.....	$609,015.35	$1,349,548.70
Total, first seven months in 1878.....		609,015.35
Increase thus far this year.....		$740,533.35

"The statements of bullion shipments for July made in other papers have all been incorrect, and have failed to give the district credit for its full production.

"Since the 1st of August, the Standard Company has made a shipment of two bars, valued at $38,200.87.

Consolidated Virginia and California Dividends.—The *Stock Report* of the 15th inst. publishes the following: "The following statement in regard to the dividends paid by the Consolidated Virginia and California mines is taken from the books of said companies:

"'The Consolidated Virginia Mining Company paid ten dividends of $3 each on the old shares, thirty-four dividends of $10 per share, two of $5 per share, and three of $2.50 per share—in all, forty-nine dividends, aggregating $387.50 on each old share, equaling $77.50 on the present issue of 540,000 shares, and amounting to a total of $41,850,000 paid out in dividends. The first dividend was paid May 7th, 1874, and the last in June, 1879.

"'The California Mining Company has paid out 26 dividends of $2 each, 4 of $1 each, and 2 of 50 cents each, being 32 dividends in all, amounting to a total of $30,780,000, or $57 per share. The first dividend was paid in May, 1876, and the last in June, 1879.

"'The total amount paid out in dividends by the two companies to date is $72,630,000.'"

Yuma City (Arizona) will have to be considered hereafter as a bullion-shipment point. The *Sentinel* of August 2d says: "On Saturday last, 120,028 pounds galena ore were received from Castle Dome, and on Sunday ten bars of silver, worth $7500, and $803 in gold bullion were received from Mohave County."

The Phenix (A. T.) *Herald*, August 11th, notes the passage through of $60,000 in bullion from the Tiger mines.

At Salt Lake, the total bullion receipts for the week ending August 14th, were as follows:

Horn-Silver, 7 cars.....	$14,000.00
Stormont, 12 bars.....	15,348.57
Germania, 3 cars; Morgan, 4 cars; Chicago, 4 cars; Marsac, 5 bars, and Kessler, 1 lot.....	30,975.00
Ontario, 30 bars.....	25,508.43
Leeds, 4 bars.....	6,899.87
Pioneer Mills, Leeds, 9 bars.....	11,292.69
Christy.....	7,284.88
	$109,365.44

The First National Bank of Black Hawk, Colorado, shipped from the 1st to the 13th inst., inclusive (two weeks), 430 ounces gold, valued at $23,000.

The Rocky Mountain National Bank, Central City, Colo., shipped in gold $9500 August 16th.

$137,000 was the yield of three Dakota mines for the two weeks ending August 10th, namely, $60,000 from the Homestake; $42,000 from the Deadwood, and $35,000 from the Golden Terra.

The production of the Homestake mine for July was $52,345.

The Tybo Consolidated mine, Nevada, is said to be looking well, and yielding ore in abundance. The output for July amounted to about $22,000.

The Tiger Company shipped, during July, 26 bars of bullion to San Francisco, worth about $36,000. The Peck and Tip-Top mills each shipped about the same amount, making the yield of Yavapai County over $100,000.

The Manhattan S. M. Co., shipped from Austin on the 12th inst., 12 bars of bullion, weighing 906 pounds and valued at $11,820.33.

Bullion to the amount of 56,890 pounds was shipped by the Eureka Consolidated on the 10th inst.

The Martin White Company shipped for the week ending on the 9th inst., bullion valued at $12,987.10.

We are indebted to the Superintendent of the Indian Queen Mining Co., for the following official monthly report for July, 1879:

Tons of ore mined.....	149·795
" " " treated.....	146·9515
Bullion yield of above.....	$17,486.82

The reduction and shipments of bullion from this mine for May, June, and July, are as follows:

	Tons.	Value.
May 31st...	177·695	$17,940.21
June 30th.....	169·266	16 174.12
July 28th.....	146·915	17,486·82
Total 3 months..	493·9125	Total value..$50,701.15

The bars average nearly 900 fine amalgamations, 95 per cent.

The Leadville Output.—That the ore production of this district is steadily increasing is well known to all who are observant, says the *Reveille*, yet its magnitude can only be realized by a visit to the numerous smelting and sampling establishments in and about the city. New mines are constantly being added to the list of producers of milling-ore until the number of single and consolidated properties aggregate 35 as registered upon the books of the various reduction works, or, counted singly, about 50 separate mines. These now average 824 tons daily delivered to the mills, with a marketable value of $80 per ton, and from present indications this will rise to over 1000 tons per day within the next two months, which will bring the year's product very close to the nine-million estimate made by the *Reveille* on the 1st day of January, 1879.

The same authority observes: "For the month of July, Meyer & Co. purchased bullion, outside of that produced by the Harrison Reduction Works, amounting to the value of two hundred and sixty thousand dollars. During the same time, twenty-four hundred tons of ore have been handled, being an average of eighty tons per day, which has a marketable value of eighty dollars per ton. Some of the ore coming to these works is of very high grade. A lot of first-class ore from the Sylvanite mine on Elk Mountain ran eleven hundred and seventy-seven dollars and sixty-nine cents per ton. The second-class returned four hundred and

twenty-six dollars and ninety-one cents to the ton. One lot from the Little Pittsburg milled six hundred and eighteen dollars per ton, and from the New Discovery, six hundred and twenty-seven dollars and sixty-two cents. The average of receipts of ore this month is much larger than during July."

The Colorado ore-buyers report a remarkable increase in the amount of ore offered in the market. They also report a constant increase in the value of the same.

The smelter at Golden, Colorado, ships $12,000 per week.

It is estimated that over 500 ounces of gold will be taken from the placers of Hillerton District, Gunnison County, Colorado, this season.

The owners of silver mines on the Howard Fork, Colorado, having no place to treat their ores, are shipping them to Pueblo, a distance of 270 miles, costing them some $70 per ton.

Quarterly Statement of Storey County (Nev.) Ore and Bullion.—According to returns made to the Assessor of Storey County, the product of the mines in that county for the quarter ending June 30th, was as follows:

Mines.	Tons.	Average.	Bullion.
California	19,100	$47	$903,000
Consolidated Virginia	14,398	43	620,500
Chollar	8	15	124
Consolidated Imperial	2,350	14	31,900
Justice	124	6	800
Ophir	4,427	60	269,100
Potosi	8	15	124
Silver Hill	552	9	4,500
Sierra Nevada	1,800	61	110,400
Trojan	1,298	10	12,800
Totals	44,055	$44	$1,953,248

In addition, three mills were employed on tailings in the same county, working up 15,300 tons, netting $160,800, or a little over $10 per ton.

The Leadville Mining Company, of Colorado, is producing at the rate of $1000 a day.

The Manhattan, Nevada, produced in bullion from July 27th to August 2d, $2,166.20. The month's (July) product, in assay value, was $72,825.34.

The product of the Standard mine for July was $141,422.

The Northern Belle produced $72.124 in July.

The Ruby Chief, Bullion Chief, Ruby King, and Lead Chief mines, in the Anthracite Creek District, Colorado, are now shipping ore.

The July product of the Oneida mine, at Sutter Creek, Cal., was $10,405.

The product of the Ophir for July was $108,591.

On the 4th instant the Phenix (Nev.) sent $30,930 in bullion to San Francisco, it being its first shipment.

On the 7th of August, $4400 was shipped from the Hillside, and $18,750 from the Bodie. The Standard shipped $38,200 on the 4th, Indian Queen $4800, and Northern Belle $3900.

The Martin White Company, shipped, for the week ending the 9th inst., bullion valued at $12,987.10.

The production of the Belle Isle mine in July was $139,207.75; that of the Independence, $53,897, and of the Grand Prize, $7152.45, making a total for the Tuscarora mines of $200,177.56.

Bullion to the amount of 56,890 pounds was shipped by the Eureka Consolidated on the 13th inst.

During the week ending the 9th inst., $5184 in bullion were shipped from Pioche District, Nev.

The July coal, ore and bullion shipments and receipts over the Utah Central and Utah Southern Railroads were as under:

Utah Central Railroad Received: Coal, 4,216,335 lbs.; coke, 1,107,000 lbs.; charcoal, 645,000 lbs.; ore, 80,722 lbs.; pig-iron, 29,740 lbs.

Forwarded: Bullion, 2,093,277 lbs.; ore, 325,000 lbs.; lead, 470,489 lbs.; copper, 128,553 lbs.

Utah Southern Railroad Received: Bullion, 2,095,973 lbs.; ore, 2,474,593 lbs.; rock, 942,050 lbs.; iron ore, 1,760,000 lbs.; lead, 482,079 lbs.; fire-clay and brick, 79,975 lbs. Total, 8,833,460 lbs.

Forwarded: Coal, 1,419,400 lbs.; charcoal, 630,000 lbs.; coke, 1,004,630 lbs.; ore, 327,458 lbs.; fire-clay and brick, 46,046 lbs.; bullion, 121,403 lbs. Total, 14,357,915 lbs.

Salt Lake Ore and Metal Market.

The *Inter-Ocean's* correspondent, under date of the 11th, says: "The shipments of bullion, lead, and copper ore for the week ending August 9th, were as follows: 10 cars bullion to Pittsburg; 6 cars bullion to Omaha; 2 cars bullion to Chicago; 2 cars copper ore to Baltimore; 5 cars lead ore to Omaha; bullion, 335,247 pounds; lead ore, 105,700 pounds; copper ore, 43,355 pounds. Total, 534,302 pounds. There are no sales not already reported.

FINANCIAL.

Coal Stocks.

NEW YORK, Friday Evening, August 22, 1879.

There is a falling off of some 80,000 shares in the transactions in the coal stocks during the operations of the past week, as compared with the week previous. There is without exception, however, an improvement in the quotations, the improvement being about equally divided between the stocks dealt in upon this and those upon the Philadelphia market. Two fifths of the whole business recorded has been in the stock of the Delaware, Lackawanna & Western Railroad, the sales comprising 105,725 shares out of a total of 165,000 shares reported. This stock closes at 58⅝@58¾ bid and asked. Sales have been made during the week as low as 56½, but the bulk of the operations has been within the range noted, which is an improvement of about two points for the week, and which improvement is fairly reflected throughout the list. The improvement is supposed to be due to the fact that anthracite coal has been selling during the week at the lowest prices ever attained in this city, and the losses of the companies must consequently have been heavier than usual.

COAL STOCKS.

Name of Company.	Capital Stock.	Shares. No.	Shares. Par Val.	Last Dividend.	Rate per Ann.	Aug. 16. H.	Aug. 16. L.	Aug. 18. H.	Aug. 18. L.	Aug. 19. H.	Aug. 19. L.	Aug. 20. H.	Aug. 20. L.	Aug. 21. H.	Aug. 21. L.	Aug. 22. H.	Aug. 22. L.	Sales.
	*		$	Mo. Y.	Per c'nt													
Ches. & O. RR	15,000,020	150,000	100	....	....	....	....	....	....	....	....	7½	....	....	....	....	....	45
Consol. Coal.	10,250,000	102,500	100	Jan. 77	2½	....	....	....	....	....	....	....	....	....	....	....	....	
Del. & H. C.	20,000,000	200,000	100	Aug 76	4	48	47⅜	47⅞	47	48	47¾	47¾	47⅜	48¼	47⅜	48¼	47⅞	4,440
D., L. & W. RR	26,000,000	524,000	50	July 76	2½	58	57¼	58	56½	58½	57	58⅜	57¼	58¾	57½	59	58	105,725
Lehigh C. & N	10,148,350	208,971	50	Nov 76	1½	5½	....	....	24¼	24	24¼	....	23⅞	23¾	....	24	24	1,411
Leh. V'y R. R	27,228,855	540,858	50	J'ne 79	1	4	....	....	42	41¾	42¼	42	41½	42	41¾	42¼	42	1,000
Maryl'd Coal	4,400,000	44,000	100	Jan. 76	1½	1½	....	....	....	....	....	....	....	....	....	....	....	
Morris & Es'x	15,000,000	300,000	50	....	....	....	....	....	91	90¾	91½	....	92	91⅞	92	91¾	92	2,220
N. J. C. R. R.	20,000,000	200,000	100	Apr 76	2½	2½	50¾	50	51	49¾	51⅜	50¼	51⅜	50½	52¼	50⅞	52⅜	52½	27,155
Penn. Coal	5,000,000	100,000	50	May 78	3	....	....	....	....	....	....	....	....	....	....	....	....	
Penn. R. R.	60,870,200	1,357,404	50	May 79	2	8	40¾	40¾	40⅜	40⅜	40⅞	40¾	41	40¾	41⅛	40¾	41⅛	41¼	15,925
Ph. & R. R. R.	34,278,175	685,563	50	Jan 76	4 2½	10	19⅞	19¾	19¾	20	19½	20	19¾	19⅝	19½	19¾	19⅜	6,125

Quotations of New York stocks are based on the equivalent of $100. Philadelphia prices are quoted, so much per share.

†The Delaware & Hudson Canal Co. has paid in dividends to date $38,821,104, and the Philadelphia & Reading* $43,012,497

Total Sales..... 241,527.

The North Pennsylvania Railroad announces a dividend of *one and one half* per cent (less five per cent of the amount retained as contigent fund), payable August 27th.

One thousand shares of the *Hampshire & Baltimore Coal Co.*—par value, $10—were sold at auction, at 85c. per share.

Miscellaneous Stocks and Quotations.

Sales and quotations of the stocks and bonds dealt in here, at Philadelphia and Baltimore, for the week ending the 20th inst. are given in the following tables. The Philadelphia quotations will have a * affixed. The Baltimore quotations are indicated thus †.

Stocks.	Par Value.	High'st	Lowest	Closing	Sales: Shares.
American Coal Co.	$25	28	.....	.....	.....
St. L., I. M. & S. R. Co.,	100	28½	26¾	.....	*3,687
Spring Mt. Coal Co.	50	.....	.....	.....	.....
*Cambria Iron Co..	50	.....	.....	.....	.....
*Penn. Salt Mf'g Co.	50	.....	.....	.....	.....
*Westm'land C. Co.	50	.....	.....	.....	.....
*Buck Mt. Coal Co..	50	.....	.....	.....	.....
*Schuyl. Nav. Co...	50	.....	.....	.....	.....
†B. & O. RR. Co. 1st pf	.....	.....	.....	.....	.....
†B. & O. RR. Co. 2d pf	100	101½	.....	.....	4
" " " " com	90	124	.....	124	252
†George's C'k C. Co	100	.....	.....	.....	.....
†S. Clara M'g Co...	100	.....	.....	.....	.....
†Atlantic Coal Co.	10	80c.	.....	.....	80c.

Bonds.	Princ'l. When Due.	Int'est. When Due.	High'st.	Lowest	Amount.
D., L. & W., 7s, conv	1882	J. & D.	.....	.....	.....
" " " " 2d 7s....	1907	M. & S.	115	.....	$8,000
M. & E., 1st con., 7s	1915	J. & D.	99½	.....	1,000
" " " 2d 7s.....	1891	F. & A.	110	.....	1,000
N. J. C., 1st mtge. new	1890	F. & A.	116	.....	3,000
" " " 1st mtge., con	1899	Q.	98¾	98½	*56,000
" " " convt. 7's ...	1902	M. & N.	99½	98	*150,000
" " " Adimt bds...	1903	M. & N.	103	102	7,000
L. & W. B., con....	1900	Q.	80½	78	*136,000
" " Income	1888	M. & N.	50¼	.....	5,060
Am. Dock & Imp. 7s	1886	J. & J.	90	89¾	*7,000
St. L. I. M. & S. 1st mt	1892	F. & A.	112¾	.....	4,000
" " " " " " 2d, 7s	1897	M. & N.	95	.....	20,000
St. L. & I., M. C. & F., 1st, 7s.....	1891	J. & J.	.....	.....	.....
Ches. & O., 1st s'rs b	1908	M. & N	43	42½	17,000
" " 6s, cr. int. df	1918	J. & J.	23¾	.....	5,000
D & H C Co., 1st m. rg	1884	J. & J.	101¾	.....	2,000
" " " " " "	1891	A. & O.	102½	102	2,000
" " " " m. loan cp	1894	A. & O.	.....	.....	.....
" " " " " rg.	1894	.....	105½	.....	2,000
" " " " new mge.	.....	J. & D.	.....	.....	.....
" " " " 1st Pa. div., 7s, coup.	1917	M. & N.	.....	.....	.....
" " " " 1st Pa.. div., 7s, rg	1917	M. & S.	.....	.....	.....
*L. V. R., 1st m. 6s. cp.	1898	J. & D.	.....	.....	.....
" " " " rg.	1898	J. & D.	.....	.....	.....
" " " 2d m. 7s, rg.	1910	M. & S.	123½	123	3,000
" " " con. m. 6s, rg	1823	J. & D.	109	.....	2,000
" " " 6s cp.	1923	J. & D.	.....	.....	.....
*Pa. RR., 1st m. 6s, cp	1880	J. & J.	103½	.....	15,000
" " g. m., 6s, cp.	1910	J. & J.	115½	.....	1,000
" " " 6s, rg.	1910	A. & O.	117½	.....	1,000
" " con. m. 6s, rg.	1905	Q.	110	.....	5,000
" " " 6s, cp.	1905	J. & D.	.....	.....	.....
" " new loan, 6s	.....	.....	.....	.....	.....
*P. & R. R., 1st m. 6s, R. C. 43-44.....	1880	J. & J.	104	.....	22,000
*P. & R. R., 1st m. 6s, R. C. 48-49.....	1880	J. & J	.....	.....	.....
*P. & R. R., gen 6s, G C	1908	J. & J.	.....	.....	.....
" " " scrip....	1882	J. & J.	73¼	71¾	13,595
" " " in. m. 7s, cp	1896	J. & D.	.....	.....	.....
" " " c. m. 7s, cp.	1911	J. & D.	111½	.....	1,000
" " " " 7s. rg.	1911	J. & D.	112	.....	1,000
" " " cvt. 7s, R. C	1893	J. & J.	40	.....	5,000
" " C. & I. Co., Deb 7s, R. C.....	1892	M. & S.	.....	.....	.....
& R. C. & I. Co., m. 7s, R. C.....	'92-3	various	...	.....	.....
*L. Nav. Co., 6s, rg. m.	1884	J & Q.	.....	.....	.....
" " RR., rg. m.	1897	F. & Q.	.....	.....	.....
" " cvt. Gold R.	1894	M. & S.	.....	.....	.....
" " m Gold R. C.	1897	J. & D.	.....	.....	.....
" " con. m. 7s, rg.	1911	J. & D.	.....	.....	.....
*P. & N. Y. C., 7s, R. C.	1896 1906	J. & D.	109	.....	5,000
*Pa Canal, 6s, cp..	1910	J. & J.	79½	.....	2,000
*Schuyl. Nav., 1st m. 6s, rg.....	1897	M. & Q.	.....	.....	.....
*Sus. Coal, 6s, rg....	1911	J. & J.	.....	.....	.....
†Balt. & O. RR., 6s..	1880	J. & J.	.....	.....	.....
" " " " 6s..	1885	A. & O.	108⅜	108½	2,000
Total transactions for the week..					$369,595

* Assented.

Copper and Silver Stocks.

[Reported by S. G. STUDLEY, Commission Stock Broker, Member of the Boston Stock Exchange.]

BOSTON, August 21, 1879.

The market continues inactive, with little inquiry except for dividend-paying stocks.

The balance of the list is heavy and dull, with little prospect of a reaction in the present condition of things.

Calumet & Hecla advanced from 187 sales the 19th to 190 sales to-day, closing 189@191. The annual meeting of the Calumet & Hecla Mining Company was held at the company's office, in the Equitable Building, yesterday, when the following-named directors were elected: Alexander Agassiz, Quincy A. Shaw, George Higginson, H. H. Hunnewell, and James N. Wright. The directors, at a subsequent meeting, reelected Alexander Agassiz President, and C. W. Seabury, Secretary. The report of the Treasurer showed assets as follows: Cash (figuring copper at thirteen cents a pound), $2,458,286.39; supplies at mine, $188,297.05; and bills receivable at mine, $1535.47; total, $2,648,118.91. The liabilities are drafts in transitu, $77,750.85, and bills payable at mine, $102,325.51; total, $180,076.36. Excess of assets over liabilities, $2,468,042.55.

Franklin advanced to 7 bid.

Osceola firm, 16¼ bid.

Quincy firm, 12½ bid.

Copper Falls is neglected, without a quotation for the week.

Pewabic dull, 2¼ asked.

Ridge, 1⅛@¾.

Duncan Silver, 3@3½.

International, 37½ bid.

Silver Islet declined to 32, sales, and that bid at the close for small lots.

Gold and Silver Stocks.

NEW YORK, Friday Evening, August 22, 1879.

Nearly three fourths of the number of shares sold were in companies whose properties are practically worthless. There has been but little encouragement in the dealings of the week. The depression in the San Francisco stocks discourages those who have been making the brisk business of the past year, as most of them have some of these stocks recording a loss at present prices. We still look for a better state of things in about thirty days.

The Bodie stocks do not hold so high a position in the minds of the public, if we may judge from the dealings in this market.

Bodie records sales of 475 shares at $11@$12.

Standard shows much more strength, although the transactions continue to be light. The sales amount to 925 shares at $27½@$27.

On Saturday, and early in the week, the dealings in Bechtel amounted to 275 shares, at $1.35@$1.20.

On Monday and Tuesday, there were dealings in Bulwer amounting to 185 shares at $9¼. This stock is lower in San Francisco. The mine is a good one, and shows more value for the present quotation than most of the mines in the district.

Consolidated Pacific makes but a very small showing in the transactions, as compared with but a few weeks ago. The sales for the week only amount to 390 shares at $7⅞@$8½, which is still much above any value the mine has shown.

The sales of Tioga aggregate 245 shares at $3.60 @$4.

The Comstock mines, through the old bonanzas and Imperial, show a very good business.

California has not been as active as usual of late. The sales amount to but 1635 shares at $4.60@$4.80.

Consolidated Virginia has been unusually active, the dealings aggregating 6150 shares at $4.60@$4.80.

On Wednesday and yesterday, the sales of Yellow Jacket amounted to 150 shares at $17¼@$17½. Although considerable of this stock is held in the East, there is but very little done in it on our Exchange.

Consolidated Imperial shows a very liberal business, the sales amounting to 6285 shares. The price, however, has had a steady weakening tendency.

Leviathan records sales of 800 shares at 25c. Our advices are very unfavorable to the property.

GENERAL MINING STOCKS.

Dividend Paying Mines.

NAME AND LOCATION OF COMPANY.		Feet on Vein.	Capital Stock.	SHARES. No.	SHARES. Par Val	ASSESSMENTS. Total levied to date.	ASSESSMENTS. Date and amount per share of last.	DIVIDENDS. Total paid to date.	DIVIDENDS. Last Dividend.	Rate p. An	HIGHEST AND LOWEST PRICES PER SHARE AT WHICH SALES WERE MADE. Aug. 16. H.	Aug. 16. L.	Aug. 18. H.	Aug. 18. L.	Aug. 19. H.	Aug. 19. L.	Aug. 20. H.	Aug. 20. L.	Aug. 21. H.	Aug. 21. L.	Aug. 22. H.	Aug. 22. L.	SALES.
Argenta	Nev.	1,500		100,000		20,000	Feb.. 1870	20,000	July.. 1879	20												
Belle Isle	Nev.	1,500		100,000		200,000		75,000	Aug. 1879	50												
Belcher, G. S.	Nev.	1,040	10,400,000	104,000	100	1,704,400	July. 1879	1 00	15,397,200	Apr. 1876	1 00											
Bobtail, G	Col.	2,500	1,136,330	227,326	5	*			90,930	Nov. 1878	15											
Bobtail Tunnel, G	Col.		100,000	20,000	5	52,000	July 1873	0 30	56,000	Dec. 1878	40											
Bodie, G	Cal.		10,000,000	10,000	100	75,000	May. 1879	1 00	900,000	Aug. 1879	1 00											
California, G. S.	Nev.	600	54,000,000	540,000	100				31,020,000	Aug. 1879	50	4.75	4.70	4.75	4.70	4.70	4.60	4.80	4.70	4.70	4.65	4.75	4.70	1,635
Calumet & Hecla, C	Mich		2,000,000	80,000	25	1,200,000			14,250,000	May. 1879	5 00	187		187		187	186¼	187						88
Caribou Con	Col.	1,400	1,000,000	100,000	10				30,000	July. 1879	1					6¾	6	6¾	6	6⅞	6⅝	6½	6¼	2,365
Central, C	Mich		500,000	20,000	25	100,000	June 1862	0 60	1,340,000	Feb. 1879	4 00													
Chollar, G. S.	Nev.	700	11,100,000	112,000	100	1,750,000	Sept. 1878	5 00	3,060,000	Feb. 1872	1 00													
Copper Falls, C	Mich		1,000,000	20,000	50				100,000	Nov. 1871	1 00													
Cons. Virginia, G. S.	Nev.	710	54,000,000	540,000	100	474,600	June 1873	3 00	12,120,000	Aug. 1879	50	4.75	4.60	4.75	4.65	4.80	4.70	4.75	4.65	4.80	4.75	4.80	4.75	6,150
Confidence, G. S.	Nev.	130	2,496,000	24,960	100	236,320	Apr. 1878	0 50	78,000	May. 1865	8⅛													
Crown Point, G. S.	Nev.	600	10,000,000	100,000	100	2,673,350	June 1879	1 00	11,588,000	Jan.. 1876	2 00													
Eureka Cons., G. S. L.	Nev.		5,000,000	50,000	100	100,000	May. 1876	1 00	4,000,000	Aug. 1879	1 00			16									100
Excelsior W'k's & M. Co	Cal.	525 acres	10,000,000	100,000	100					July. 1879	25													
Findley, G	Geo.		200,000	200,000	1				8,000	May. 1879	1c	61	60	58		64	58	7	6½					2,800
Franklin, C	Mich		500,000	20,000	25	360,000	June 1876	5 00	585,000	Nov. 1871	1 00													110
Gould &Curry, G. S.	Nev.	612	10,800,000	108,000	100	3,044,000	July. 1879	1 00	3,826,800	Oct. 1870	10 00													
Grand Prize	Nev.	1,500		100,000		100,000	July. 1878	1 00	400,000	Feb. 1878	1 00								3.50					35
Great Eastern		1,200	300,000	300,000	100				10,000	July. 1879	1			55		55		54		54		55		3,600
Green Mountain S.M.C.	Cal.	4,350	1,250,000		10				12,500	Aug. 1879	5													
Hale & Norcross, G. S.	Nev	400	11,200,000	112,000	100	3,082,000	Mar. 1879	1 00	1,598,000	Apr. 1871	5 00													
Homestake, G	Dak		10,000,000	100,000	100	200,000	Apr.. 1878	1 00	240,000	Aug. 1879	20	39	38½						39	38½				140
Hukill, G. S.	Col.	3,238	1,000,000	100,000	10	*				Dec. 1878	0 10					1 70	1 60	1 70		1 70	1 65	1 70	1 65	1,920
Independence	Nev.	1,500		100,000		75,000	Feb.. 1878	15	175,000	July. 1879	25	2.75	2.70	2.65	2.55	2.65	2.60	2.60	2.50	2.25	2.20	2.15	2.10	5,230
Kentuck, G. S.	Nev.	95	3,000,000	30,000	100	300,000	Aug. 1878	1 00	1,252,000	Mar. 1879	5 00													
K. K. Cons	Nev.			50,000		300,000	Aug. 1879	1 00	300,000	Sept. 1873	0 25													
Leadville	Col.		2,000,000			*			60,000	June 1879	10	2.80	2.50	2.80	2.65	2.80	2.65	2.75	2.60	2.60		2.80	2.55	10570
Leeds	Uth.	3,000		60,000					78,000	Oct.. 1878	0 15													
Leopard, L. G. S.	Nev.	1,500	5,000,000	50,000	100	312,500	June 1879	50	162,500	Dec. 1876	0 50													
Little Pittsburg	Col.		20,000,000	200,000	100				800,000	July. 1879	50													
McClinton	Cal.	1,000		60,000		66,000	May. 1879	0 25																
Manhattan	Nev.			100,000		150,000	July. 1879	1 00	450,000	Feb. 1877	1 00													
Martin White	Nev.			100,000		65,000	Jan. 1879	1 50	90,000	July. 1879	0 50													
Merrimac, S	Mas.	1,500	500,000	100,000	5	*	June		120,000	Mar.														
Minesota, C	Mich.		1,000,000	20,000	50	436,000		1869 1 00	1,820,000	Mar. 1876	0 50													
Modoc	Cal.	1,000		100,000		480,000	Feb.. 1879	0 50	50,000	Dec. 1876	0 50													
Moose	Col.	30,000	2,000,000	200,000	10	*			560,000	Mar. 1878	0 25			3	2.95	3	2.90	2.80				2.85		725
National, C	Mich.		500,000	20,000	25	195,000	Oct.. 1875	1 00	360,000	Oct. 1873	1 00													
N. Y. & Colorado, G	Col.		1,000,000	50,000	20	*			75,000	July. 1879	0 10													
Northern Belle, S	Nev.	1,600	5,000,000	50,000	100				1,500,000	Nov. 1877	1 00													
Ontario	Uth.	3,000	10,000,000	100,000	100				2,300,000	Aug. 1879	50	41½	41			41								197
Ophir, G. S.	Nev.	675	10,080,000	100,800	100	2,538,200	Nov. 1878	1 00	1,394,400	Mar. 1864	4 00													
Osceola, C	Mich.		1,000,000	40,000	25	880,000	Mar. 1876	2 00		July. 1879	1 50													
Pewabic, C	Mich.		500,000	20,000	25	135,000	June 1868	3 00	480,000	July 1873	1 00													100
Potosi, G. S	Nev	700	11,000,000	112,000	100				$															
Phœnix, C	Mich.		1,000,000	20,000	50	817,500	Sept. 1870	3 00	10,000	Dec. 1876	1 00													
Plumas	Cal.		1,000,000	100,000	10				151,000	July 1879	S			2.65		2.65		2.75	2.70	2.75		5.80	2.80	850
Quincy, C	Mich.		200,000	20,000	10				2,230,000	Feb. 1878	5 00	12⅜	12½					12¾						160
Raymond & Ely, G. S.	Nev.	5,000	3,000,000	30,000	100	60,000	Apr.. 1879	1 00	3,075,000	Sept. 1873	3 00													
Ridge, C	Mich.		500,000	20,000	25	200,000			20,000	Feb. 1875	1 00							1½						100
Rye Patch	Nev.	1,000		80,000		157,500	Dec.. 1878	1 00	105,000	Dec. 1877	0 25													
St. Joseph, L	Mo.	2,000 acs.	1,000,000	100,000	10				250,000															
Savage, G. S.	Nev.	800	11,200,000	112,000	100	4,572,000	July. 1879	1 00	4,460,000	June 1869	3 00													
Seaton, G. S.	Col.	1,700	500,000	50,000	10	*				May 1877	0 10													
Sierra Nevada, G. S.	Nev.	3,650	10,000,000	100,000	100	2,850,000	June 1879	3 00	102,000	Jan. 1871	1 00													
Silver Islet	Mich													35	33½	33		33						90
Silver King	Ariz	1,500	10,000,000	100,000	100				450,000	Nov. 1878	0 50													
Standard	Cal.		10,000,000	100,000	100	50,000	July 1878	1 00	1,250,000	Aug. 1879	0 50					27½	27	27½	27	27½		27		925
Yellow Jacket, G. S.	Nev.	1,200	12,000,000	120,000	100	3,658,000	Apr.. 1879	1 00	2,184,000	Aug. 1871	2 50							17¼		17⅛				150

Non-Dividend Mines.

Ailouez, C	Mich.		1,000,000	20,000	50	940,000	May	1876	5 00															
Alpha, G. S.	Nev.	306	3,000,000	30,000	100	240,000	Mar.	1878	0 10															
Alta	Nev.	600		108,000		1,101,000	Feb.	1879	1 00															
Am. Flag, G	Col.	5,300	600,000	60,000	10	*										21c	20c	20c		22c		21c	20c	3,900
Andes	Nev.	2,000		100,000		280,000	May.	1879	0 25															
Baltimore Cons	Nev.	1,050		84,000		1,015,000	Apr.	1878	0 50															
Benton	Nev.	600		108,000		91,800	Dec.	1873	0 50															
Bechtel	Cal.			60,000		60,000	Apr..	1878	0 50			1.35				1.25	1.20							275
Belvidere	Cal.	1,500		60,000		33,000	Feb.	1879	0 20															
Bertha & Edith, G	Vir.	645 acs.	500,000	500,000	10	*						10c	8c	10c	9c	10c	9c	11c	9c	11c	10c	11c	10c	78,600
Best & Belcher, G. S.	Nev.	545	10,080,000	100,800	100	639,390	Apr..	1879	1 00															
Buckeye	Col.		2,000,000	400,000	5	*						48c	44c	50c	46c	52c	48c	53c	50c	55c	50c	55c	51c	33,100
Bullion, G. S.	Nev.	943½	10,000,000	100,000	100	3,102,000	May.	1879	1 00															
Bulwer	Cal.		10,000,000	100,000	10		July.	1879	1 50					9¼		9¼								185
Cal., B. H.	Dak.		10,000,000	100,000	100	165,000	Sept.	1878	0 50			2.75						3.50+		3.70		3.75	3.70	1,050
Caledonia	Dak.	2,188	10,000,000	100,000	100	1,640,000	Apr.	1879	0 50															
Cashier	Col.		500,000	250,000	2	*																		
Challenge	Nev.	90		50,000		10,000	Nov.	1878	0 20															
Cleveland, G	Col.	3,715	250,000	25,000	10	*						3.60		3.60		3.60		3.70	3.50	3.65	3.60	3.60		1,200
Cons. Imperial, G. S.	Nev.	468	50,000,000	500,000	50	975,000	Sept.	1879	0 20			1.45	1.40	1.40		1.35		1.30	1.25	1.40	1.25	1.30	1.25	6,285
Con. Pacific	Cal.	1,400	600,000	60,000	100							6½	6⅝			7¾	7¼			6½				350
Dahlonega	Ga.		250,000	250,000	1	*								17c	16c	16c		17c		17c		18c		5,400
Dana, C	Mich.		500,000	20,000	25	68,000	Jan.	1863	0 50															
Day	Nev.	1,500	10,000,000	100,000	100	70,000	Feb.	1879	0 15															
Dayton	Nev.	1,600	10,000,000	100,000	100	750,000	Apr.	1878	0 25															
De Frees	Ariz	1,500	10,000,000	100,000	10	180,000	May.	1879	15															
Duncan, S	Ont.		1,200,000	60,000	20	75,000	July	1876	41⅔									3						
Exchequer, G. S.	Nev.		10,000,000	100,000	100	480,000	July.	1879	1 50															
Gold Placer, G	Col.		5,000,000	200,000	25	*										15c				16c				600
Goodshaw	Cal.		10,000,000	100,000	10	30,000	Apr.	1879	0 10															
Granville, G	N. C.	1,200 acs.	300,000	300,000	1	*																		
Humboldt, C	Mich.		500,000	20,000	25	100,000	Sept.	1878	0 15															
Hussey	Nev.	4,500	10,000,000	100,000	100	125,000	May.	1879	0 15															
International, S	Ont.		1,200,000	60,000	20	*																		100
Julia, G. S	Nev.	3,000	11,000,000	110,000	100	872,500	July.	1879	1 25															
Justice, G. S	Nev.	2,000	10,500,000	105,000	100	2,808,500	May.	1879	1 00															
King's Mountain, G	N. C.		1,200,000	120,000	10	*																		
Kossuth	Nev.	2,700	10,700,000	108,000	100	421,200	Aug.	1877	0 15															
Lacrosse	Col.	3,900	1,000,000	100,000	10	*										21c	20c							2,000
Leviathan	Nev.	2,000	10,000,000	100,000		265,000	Mar	1879	25															800
Lucerne	Col.	4,200	5,000,000	500,000	10	*						26c		27c		27c	26c	29c	28c	29c	28c	29c		5,350
Madison, C	Mich.		500,000	20,000	25	123,000	Sept	1876	0 10															
Mariposa preferred	Cal.	44,387	5,000,000	50,000	100	1,425,000	June	1877	1 00															48
" common	Cal.	acres.	10,000,000	100,000	100	1,425,000	June	1878	1 00															60
May Belle		1,500	10,000,000	100,000	100																			
McCracken	Ariz	4,500	10,000,000	100,000	100	100,000	Oct	1878	0 50															
Mexican, G. S.	Nev.	600	10,080,000	100,800	100	318,200	July.	1879	2 00															
Mono	Cal.	750	5,000,000	50,000	1 0	75,000	Mch.	1879	0 50															
Navajo	Nev.	500	10,000,000	100,000	100	145,000	Feb.	1879	0 20															
New York	Nev.	1,000	10,000,000	100,000	100	80,000	Apr.	1879	0 40															
Orig. Keystone	Nev.	1,500	10,000,000	100,000	100	125,000	Aug.	1879	0 25															
Overman, G. S.	Nev.	1,200	3,840,000	38,400	100	3,404,280	Mar	1879	3 00															
Petherick, C	Mich.		500,000	20,000	100	165,535		1876	0 50															
Quicksilver preferred	Cal.	8,500	4,291,300	42,913	100	*												38						2 0
" common	Cal.	acres.	5,708,700	57,087	100	*	Apr.	1878																35
Seg. Belcher, G. S.	Nev.	160	4,400,000	44,000	100	244,800	Apr.	1878	0 00															
Silver Hill, G. S.	Nev.	5,400	10,800,000	108,000	100	1,404,000	Feb	1879	0 50			2⅛				2.25								
Silver Prize	Nev.	1,500	10,000,000	100,000	100	60,000	Mar	1879	0 25															200
South Hite S. M. Co	Cal.		2,500,000	100,000	25							1.60	1.55	1.60		1.60		1.60		1.60		1.60		3,000
Star, C	Mich.		500,000	20,000		265,000	Mar	1876	0 50															
Superior, C	Mich.		500,000	20,000	25	340,000		1878	0 25															
Sutro Tunnel	Nev.		20,000,000	2,000,000	10		July		0 50			4⅛	4¼					4¼	4⅛	4¼	4⅛	4½	4⅜	8,365
Tiptop	Ariz		10,000,000	100,000	100	120,000	Apr.	1878	0 50			90c		95c				95c		1				650
Tioga	Cal.	1,500	10,000,000	100,000	100	80,000		1879	0 20					4				3.00		4	4			245
Trio	Col.	1,250	150,000	150,000	1		Apr.																	
Trojan	Nev.	1,500	10,000,000	100,000	100	265,000	Mar.	1879	0 25															
Tuscarora	Nev.		10,000,000	100,000	100	35,000	Sept.	1879	0 10							8c	7c	8c	7c	7c		7c	6c	4 1 0
Union Cons. G. S.	Nev		10,000,000	100,000	100	880,000	Sept.	1879	2 00							21								10
Utah	Nev	1,000	2,560,000	20,000	100	1,065,000	Jan.	1879	2 50															
Ward	Nev	1,200	11,000,000	110,000	100	99,000	Apr.	1879	0 30															
Wells Fargo	Nev	1,500	10,000,000	108,000	100	242,000		1879	0 25															

g. Gold. s. Silver. L. Lead. c. Copper. * Non-Assessable. † Assessment paid.

Total Assessment levied to date..... $64,364,963 Total Dividends paid to date..... $155,538,060 Total Shares sold during the week..... 208,462

The sales of Silver Hill amount to 200 shares at $2⅛@$2¼.

On Tuesday, 10 shares of Union Consolidated sold at $61.

Sutro Tunnel shows more activity, the sales aggregating 8865 shares at $4⅛@$4⅛.

In the Black Hills stocks, Great Eastern shows a fair business, the sales amounting to 3600 shares at 54@55c.

Homestake has been very quiet, the sales amounting to but 140 shares at $38½@$39.

Caledonia has shown considerable activity, the sales aggregating 1050 shares, at $3.50@$3.75, assessment paid (the latter price being reached to-day), and $2.75 on Saturday, assessment unpaid.

The Tuscarora stocks share liberally in the business of the Exchange.

Grand Prize records 25 shares at $3.50.

Independence continues to show a large business, the sales amounting to 5230 shares. There has been considerable weakness in the price, which fell off from $2.75 on Saturday to $2.10 to-day.

Tuscarora records 4100 shares at 8@6c.

In the miscellaneous stocks, we note 100 shares of Eureka at $16; Tip Top, 650 at 90c.@$1.

At the New York Stock Exchange, in stocks not otherwise classified, we note dealings as follows: Caribou, 2365 shares at $6@6¼; Ontario, 197 at $41½@$41; Mariposa Preferred, 48 at $2.50, and Common, 69 at $3@$2.50; Quicksilver Preferred, 200 at $38, and 35 at $14⅛.

There has been a fair business done in the better class of stocks of the regular list of the Mining Exchange.

The sales of Findley amount to 2800 shares at 58@64c.

Moose shows light transactions, as it frequently does when there appears to be no one about to manipulate it. The sales amount to 725 shares at $3@$2.80.

Hukill has been active during the latter part of this week, the sales amounting to 1920 shares at $1.70@$1.65.

Leadville continues to receive the greatest attention. The sales for the week aggregate 10,570 shares, although the price has been weak, selling from $2.80 down to $2.55.

Plumas is a little more active, and is gaining strength. The sales amount to 850 shares at $2.65@$2.80.

Cleveland has concluded to advance. The sales aggregate 1200 shares at $3.70@$3.50.

South Hite records sales of 3000 shares at $1.55@$1.60. These dealings are probably "washes."

The very black eye that has been given to Bertha & Edith destroys confidence in the "fancies." We note sales for the week as follows: American Flag, 3900 shares at 21@20c.; Bertha & Edith 78,600 at 8@11c.; Buckeye, 31,100 at 44@55c.; Dahlonega, 5400 at 16@18c.; Gold Placer, 600 at 15@16c.; Granville, 13,100 at 22@25c.; Lacrosse, 2000 at 21@20c.; Lucerne, 5350 at 26@29c.

Our predictions about Bertha & Edith are being constantly verified. After putting a bonded indebtedness of $25,000 upon the property, and incurring a further indebtedness of about $5000 to erect a 20-stamp mill and make other improvements, it is found that the property does not contain gold in paying quantities. The workmen and the citizens of the surrounding country, seeing that the property has no future, are beginning to put their accounts in the hands of lawyers for collection. For a debt of $90, a mule, cow, calf, and a set of harness have been levied on by the constable, and it is expected that all available property will soon pass into the same hands. We are also informed that parties to whom the company is largely indebted have agreed to release it for a small portion of the amount. The stock of this company, which is not worth a cent, is still selling at the rate of $50,000 @ $55,000. Yet this is one of the mines the ENGINEERING AND MINING JOURNAL was blamed for denouncing long ago when many of the brokers thought that gambling in any kind of worthless stocks was "promoting an interest in mining." The Mining Exchange has several properties on its list that are but little if any better. Can not some of its members inaugurate a general purification process and get rid of these disgraceful "mock-auction" fancies? Those who are interested in doing a legitimate brokerage, instead of trying to swindle the public, will find it greatly to their advantage to take some action in the matter.

It is rumored that the incline which has recently been sinking in the rich chimney of the Bodie mine passed through it into poor ground. It was reported as stopped on account of the water, and that the north winze, which was to have cut the chimney at about 100 feet further down than the incline, did not find the rich ore extending that far, and that this winze was stopped on striking the ledge, when it should have been found very rich; stopped nominally on account of water, really to give time to insiders to unload stock.

We have no direct information upon these "points;" they may account, however, for the recent decline in its value. The representatives of the company here say the incline and the winze were stopped by the water; but it might be well for those interested to have the mine visited by some competent outsider, and its condition reported, and this without any reflection. Mr. Fogus, the present superintendent, who stands very high as a superintendent, would, no doubt, offer all facilities for such an examination.

We shall, next week, publish an illustration, showing the position of the Bodie bonanza, with the inclines and several winzes which have served to show the extent of the now famous rich chimney.

The stock of the Dunderberg Mining Co. will be put on the New York Stock Exchange in September. Previous to the company's taking hold, the mine was worked by lessees, not in a systematic manner; and, as might be expected, was left in an unsatisfactory condition. The company could have paid dividends from the start, but preferred putting the mine and property in such shape that the dividends might be regular and the greatest economy secured. To this end, about 80 men have been employed. A tramway and numerous important buildings have been built, and hoisting and concentrating machinery is now on the way. There will be sufficient water at the mouth of the tunnel to concentrate all the fourth-class ore. The report of the superintendent, bearing date of August 16th, shows that the developments in the mine are very favorable. It is expected that regular mining will begin next month, after which dividends will begin.

The Green Mountain Mining Co. will declare a dividend of 5c. per share on Monday.

The production of the Ontario mine, for the first 15 days of this month, amounted to $64,956.75, assay value.

REVIEW OF THE SAN FRANCISCO MARKET.

There is not much of interest to note in the quotations of the San Francisco stocks, the majority of which are considerably below the prices prevailing a week ago. With the exception of a sudden upward movement in the stocks of the Union Consolidated and the Sierra Nevada mines, which gave a slight upward tendency to the list, the bulk of the dealings have been made at gradually declining prices. Our readers will find in the letter of our correspondent, on another page, much of interest to those dealing in a number of the stocks which we quote.

Alpha opens to-day at $24, against $24¼, as in our last. According to our exchanges, ore is regularly shipped from the Alta mine to the Briggs mill. The upraise from the 1450 to the 1350 level is disclosing rich formations. About 15 tons per day are being crushed, and there is plenty of reserve ore in sight to supply the mill for some time to come. The stock is lower, opening at $6⅝, against $7, as in our last.

Andes is selling at $1.10 per share. The cross-cut east, 350 level, of this mine is improving.

The temporary suspension of operations in the Belcher mine, caused by the breaking of machinery, has ended. This stock shows a little improvement.

Belle Isle continues its regular shipments. This stock is active in San Francisco at $3.75@$3.15 per share.

Belmont is said to be looking well; the ore-houses are being rapidly filled. This stock shows considerable activity, with an improvement in the price on the San Francisco market.

The double compartment shaft of the Belvidere mine is down 152 feet. Dealings in the stock in San Francisco are made at from $1.25@85c. per share.

The chutes on the 800 level of the Bullion mine have been repaired and work resumed. The dealings in this stock are limited.

Active operations are going forward in all parts of the Bulwer Consolidated mine. This stock is barely maintained, opening to-day at $8⅛, against $9 a week ago. This mine has real merit, and the stock will probably rise considerably when the company builds the promised mill.

The winze from the 1600 level of the Caledonia mine is in 268 feet. Latest quotations of this stock were $3⅝ per share.

The quotations of the old Bonanzas were fairly sustained, both stocks opening to-day at $4⅝, against $5¼ for California, and $4⅝, ex dividend, for Consolidated Virginia, as in our last.

The north drift, 2600 level, of the Con. Imperial mine, is in 570 feet, and is nearing the joint Alpha winze. Recent sales of this stock were made in San Francisco at $1.45@$1.60 per share.

Good progress was made in erecting hoisting-works of the Consolidated Pacific mine. This stock opens at $7, against $7½ a week ago. We have yet to see evidence of value for $700,000 or any thing near that amount in this mine.

Work on the 2700 level of the Crown Point mine is progressing favorably. This stock is fairly sustained.

The Day mine is said to be looking well; some chloride ore is found in the lower tunnel. Stock is sparingly dealt in at 10c. per share.

The shaft of the Defiance mine is down 190 feet, and the indications are said to be favorable. This stock shows limited dealings at 80c. per share.

Eureka Con. stock closed yesterday at $16, against $15½ a week ago. The ore-bodies look well, and 29 to 30 tons of bullion are produced per day. The 13th level will soon be cleared of water, when the work of cleaning the 14th level will be an easier matter.

The intense heat in the 2400 level of the Exchequer mine seriously impedes operations. The quotations for the week show a slight decline.

The winze from the lower tunnel of the Fourth of July mine is down 96 feet, showing a fine vein of ore at the bottom.

Sinking the shaft on the Gould & Curry mine has been resumed.

The pumps are steadily at work in the Hale & Norcross, and the water is gradually lowered.

The face at the cross-cut in the Hussey mine is said to show stringers of quartz, and good headway is being made. We refer our readers to another part of this issue, where our correspondent's views on the mines of this district are given.

Water in the Julia mine continues to keep the pumps actively employed.

Prospecting operations are continued in the Kossuth. This stock is selling at 25c. per share.

The south lateral drift, 750 level, of the Leviathan

SAN FRANCISCO MINING STOCK QUOTATIONS.
Daily Range of Prices for the Week.

NAME OF COMPANY	CLOSING QUOTATIONS. Aug. 15.	Aug. 16.	Aug. 18.	Aug. 19.	Aug. 20.	Aug. 21.	Opening. Aug. 22.
Alpha	25	24	24	23½	23¼	24	24
Alta	7¼	7⅛	7⅜	7	7⅛	6¾	6¾
Argenta	....	....	....	....	....	....	....
Bechtel	1¼	....	....	1⅜	1¼	1¼	1¼
Belcher	4¼	4.20	4⅛	3⅞	3⅞	4¾	4¾
Belle Isle	....	....	....	....	....	....	....
Benton	....	....	....	....	....	....	....
Best & Bel.	19	18	18¾	19	18¾	18½	18½
BlackHawk	....	....	....	....	....	....	....
Bodie	11⅝	11⅝	11	11¼	10¾	10¾	10¾
Booker	....	....	....	....	....	....	....
Bullion	....	....	....	6¾	....	....	....
Bulwer	8¾	8¾	8¾	8¾	9	8½	8½
Caledonia	....	....	....	3⅝	....	....	....
California	5⅛	4⅝	4½	3⅝	4⅝	4⅝	4⅝
Chollar	6	7	6¾	6¾	6⅝	6¾	6¾
Confidence	....	11	11¼	11½	11½	11	....
Con. Imp	....	....	....	....	....	....	1⅜
Con. Pacific	7	7⅛	6⅞	6¾	6¼	7	7
Con. Va	4⅝	4⅝	4¾	3⅝	4⅝	4⅝	4⅝
Crown P'int	4⅝	4½	4½	4⅜	4½	4⅝	4⅝
Endowm'nt	....	....	....	....	....	....	....
Eureka Con	14¾	16	15¾	15¾	15½	16	....
Exchequer	6½	6⅝	6¾	6½	6½	6⅝	6¾
Goodshaw	....	....	....	....	....	....	....
Gould &Cur	11¾	11¾	11¾	11⅞	11⅝	11⅝	11⅝
Grand Prize	3⅞	3	3½	3½	2⅞	2¾	....
Hale & Nor.	14¼	14¼	14¼	13⅞	13¾	14	14
Hamburg	....	....	....	....	....	....	....
Homestake	....	....	....	....	....	....	....
Hussey	....	....	....	....	....	....	....
Indep'd'nce	....	....	....	....	....	....	1⅞
Jackson	....	....	....	....	....	....	....
Julia Con	4½	4⅝	4½	4⅜	4⅜	4¼	4¼
Justice	3½	3⅝	3½	3½	3⅜	3¾	3¾
Kentuck	5	4⅞	4¾	4	4½	....	....
Kossuth	....	....	....	....	....	....	....
Leopard	....	....	....	....	....	....	....
Leviathan	30c.	....	⅜	⅜	30c.	¼	....
Manhattan	....	....	....	....	....	....	....
Mar. White	....	....	....	....	....	....	....
McClinton	....	....	....	....	....	....	....
MeadowVal	....	....	....	....	....	....	....
Mexican	34	35¼	37	35	34	33	36½
Mono	9⅝	9⅝	10	10	9⅝	8¼	8¼
Navajo	....	....	....	....	....	....	....
North. Belle	4	....	4	4	4¼	....	....
Ophir	36¼	36½	37	35¾	36¼	36¼	36¼
Orig. K'ys'e	....	....	....	....	....	....	....
Overman	9¼	9	9⅝	9¼	9¼	8⅞	....
P. Sheridan	....	....	....	....	....	....	....
Potosi	....	....	....	....	....	....	5
Ray. & Ely	4	3¾	3¾	3¾	1	90c.	....
Richer	....	....	....	....	....	....	....
Savage	13½	13½	13¾	13⅝	13½	12⅝	12⅝
Scorpion	2⅜	2¾	2¾	2⅞	2¾	2⅜	....
Seg.Belcher	....	....	....	....	....	....	24
Sierra Nev.	46	46⅜	44½	42	41½	40¼	40¼
Silver Hill	1¾	1⅞	1¾	1⅝	1¾	1¾	1¾
Silver King	....	....	....	....	....	....	....
Standard	....	....	....	....	....	....	....
Summit	....	....	....	....	....	....	....
Tioga	3⅞	3½	3⅝	3¾	3¾	3½	3½
Tip Top	....	....	....	....	....	....	....
Union Con.	64	60¼	61	56¾	52½	49½	49½
Utah	21	21	20½	20½	19½	19	19
Ward	....	....	....	....	....	....	....
WashoeCon	....	....	....	....	....	....	....
Yel. Jacket	17⅛	17	16¾	16¾	16⅝	16½	16¼

mine is said to show a fair grade of quartz. Our special correspondent gives his views, in another column, on this property, and we hear from other sources that it is an excellent stock to let alone.

Mexican and Ophir open at $33@$36¼, against $36¼@$37¾ per share, respectively, as in our last. The Ophir incline is said to be improving. The latter mine continues to make satisfactory shipments. It is reported that a diamond drill is employed in prospecting the lower levels of this mine.

In the drift from the winze on the 1000 level of the Modoc mine the ore is very compact, and a fair prospect is developed.

The stock of the Phœnix mine, of the Eureka District, has been selling at $2.75 per share in San Francisco, in limited amounts.

The outlook in the Raymond & Ely is very good. This company has increased its share capital, making four shares of new stock for one of the old. The closing price yesterday of 90c. on the new stock is equal to $3.60 per share on the old basis, which is somewhat of a decline from our last.

Water still materially interferes with the operations in the Savage mine. This stock opens lower, a difference of nearly $2 per share being shown between the quotation of to-day and that prevailing a week ago.

The flow of water on the 2200 level of the Sierra Nevada mine is not decreasing. The pumps have all they can do to handle the same. This stock shows a gradual decline during the business of the week, and opens at $40¼, against $48 a week ago.

Pushing cross-cut on the 1300 level of the Silver Hill mine is going forward. This stock is steady at $1¾ per share.

Tioga opens to-day at $3½.

Union Con. opens at $49¼, against $54½ a week ago. On the 16th inst., this stock was selling at $64 per share. Nothing is yet known, at least to the public, about the new bonanza which is said to exist in this mine. Our special correspondent's letter last week gave valuable information. If we may believe published letters, statements, and official reports, a good deal of prospecting is going forward in order to ascertain whether or not a large ore-body exists on the 2400 level. Judging from the irregular quotations during the operations of the past week, and also of the week previous, it is a matter of considerable uncertainty; however, it can not be much longer before the public will probably become posted upon the subject, as sufficient time has elapsed since the alleged discovery to have determined the question in the natural working of the mine with the diamond drill, etc.

The southwest cross-cut on the 2500 level of the Yellow Jacket mine is in 53 feet. This stock, in sympathy with the market, is lower. The following is an official letter from the Standard mine for the week ending the 10th inst.:

"The north drift, 385-foot level, is in 310 feet. There is no particular change to note in the ledge. We are taking out about 3½ feet of very fine ore. This ledge, in the stopes, is from 8 to 15 feet wide, and continues to look well. The winze in the west cross-cut, 550-foot level, has reached a depth of 60 feet. The ledge is 7 feet wide, of good ore. The upraise on this ledge is above the level 68 feet; the ledge is 8 feet wide, and looks well. In the stopes, the ledge is looking about the same as usual. The West Standard is 10 feet wide, of very rich ore. In the south drift, 550-foot level, the ledge is 8 feet wide, of good ore.

"In the Gildea stopes, the ledge is 3½ feet wide of good milling ore.

"The new shaft house at the incline is now completed, and the machinery has been thoroughly overhauled and repaired.

"The work of laying stone foundation at new shaft will be finished in about 10 days, after which time we will immediately set the machinery in place.

"Every thing is running nicely, in and around the mine."

The *Commercial Herald* of the 14th inst. says of the market:

"We remark an increased business in the mining-share market, but we can not say that it has given a healthier look to the immediate future prospects of a beneficial nature, particularly to the feeders of the market, who, as soon as a comparatively reasonable hope presents itself, are doomed to disappointment by a sharp and rapid movement by the insiders against any upward tendency. We apprehend that if developments on the Comstock were in order, the case would be somewhat altered, and the knocking down and setting-up business would not and could not be so freely indulged in. A telegram of the 11th inst. reads as follows: "Under the late compromise the first payment was made to-day to the Sutro Tunnel Company by the Bonanza mines, amounting to $8500 for royalty on ore extracted during the month of July. Gradually, as the lateral branches reach the different mines, they commence to pay royalty, and within twelve months it is believed that these payments will amount to $100,000 per month. The mines drained from water have commenced cross-cutting, and important developments are expected to be made before the end of the year. The Sutro Tunnel Company contemplates erecting mills immediately for the reduction of low-grade ores."

Assessments, with Dates when Delinquent.—Leviathan, 25c., September 9th; Flowery, 25c., September 10th; Occidental, 50c., September 15th; Yellow Jacket, $1, September 8th; Alpha, $1, September 11th; Original Keystone, 25c., September 1st; Justice, $1, September 7th; Tuscarora, 10c., September 6th.

Mining Assessments Delinquent in the Month of August.

We are indebted to the *Stock Report* for the following list of the mining assessments delinquent at the respective offices this month, so far as made public:

Name.	Per share.	Amount.	Del. Aug.
Addenda	$0.20	$20.000	7
Belcher	1.00	104,000	26
Belvidere	25	15,000	11
Belmont	30	15,000	7
Black Hawk	50	25,000	4
Booker Consolidated	50	50,000	4
Brilliant	10	10,000	18
Champion	5	5,000	31
Curtis Consolidated	10	10,000	11
Day	10	10,000	13
General Lee	2	2,000	16
Goodwin	10	10,000	15
Goodshaw	25	25,000	23
Gold Deposit	25	25,000	28
Gould & Curry	1.00	108,000	14
Julia Consolidated	1.25	137,500	13
Jupiter	25	16,000	11
Mariposa	50	50,000	25
Manhattan	1.00	100,000	21
McCrackin Consolidated	25	25,000	29
Mexican	2.00	201,600	14
Mount Potosi	25	25,000	26
New York	40	40,000	9
Oro	5	5,000	4
Paradise Valley	25	25,000	18
Pioneer	10	10,000	22
Queen Bee	10	6.000	13
Remington Gravel	10	2,000	17
Rustler	10	6,000	4
San Pedro	5	1,500	29
Savage	1.00	112,000	11
Sherwood Consolidated	25	25,000	12
Silver Hill	50	54.000	14
South Bodie	25	25,000	25
South Bulwer	15	15,000	20
Trojan	25	25,000	18
Ward	50	55,000	7
Western	1.00	50,000	26
Wideawake	2	2,000	1
William Penn	5	5,000	13
Utah	2.00	40,000	11
Total		$1,492.000	

Gas Stocks.

NEW YORK, Friday Evening, August 22, 1879.

The market for gas stocks is dull and unchanged.

We refer to our issue of August 16th for the list of quotations.

The Edison Electric Light.—The Oswego (N. Y.) *Times* says:

"From a communication just received from Menlo Park, the writer learns that steady progress is being made in the solution of the electric-light problem. The cost of the platinum alloy for the lamps has been so reduced that the expense of the whole burner will be even less than an ordinary gas-bracket. The standard meter for measuring the electricity to the burners has been improved, and Mr. Edison has perfected a method of insulating and conveying the wires from the general stations to the house of the consumer. He is certain that this generator can not be improved. He shows that 94 per cent of horse-power is given out in the electric current, and 82 is delivered in the wire outside of the machine. Eight ninths of the current is used for the light, and one ninth is lost in the machine. His latest experiments give seven gas-jets per horse-power, which he is certain to increase to ten. His later experiments bid fair to yield satisfactory results, and he is already willing to declare it a success."

The price of gas has been reduced from $3.50 to $3 in Palmyra, N. Y.

The Chicago Gas Question.—The Committee on Gas met on the 16th inst., and considered the proposition of the West and South Division Gas Companies to supply the city with gas. The West Side Company's bid being $2 per 1000 feet, and the South Side Company's $1.65.

These offers, and the bid of a naphtha company to furnish a good light for $15 per lamp, and from an oil company at $16 a lamp, were discussed at some length, but no conclusion was reached. The committee then adjourned.

Ten shares of the *Dorchester (Mass.) Gas Co.* were sold last week at 85¾.

350 shares of the People's Gas Co. were sold in the Baltimore Stock Exchange last week at $13 per share.

DIVIDENDS.

OFFICE OF THE LITTLE PITTSBURG CONSOLIDATED MINING COMPANY,
113 AND 115 BROADWAY,
NEW YORK, August 21, 1879.

DIVIDEND No. 4.

The Board of Directors have this day declared a dividend of $100,000 (one hundred thousand dollars), being fifty cents per share (par value $100) on the capital stock of the Company, out of the net earnings for August, 1879, payable at the office of the Company on and after September 6th. Transfer-books will close August 30th, and re open on the 8th day of September.

GEO. C. LYMAN, Secretary.

FOR SALE,
BELOW SUBSCRIPTION PRICE,
1100 SHARES
OF THE
CALIFORNIA GOLD MINING COMPANY, OF BODIE.
H. C. HARDY & SON, 10 Wall Street, New York.

Rappahannock Gold Mining Company,
Of Virginia.

OFFICE, 60 BROADWAY. CAPITAL STOCK, $250.000.

250,000 Shares, Par Value, $1. Treasury Owns 100,000 Shares.

Incorporated under New York State Laws, and Non-Assessable.

PROF. J. E. CLAYTON, one of the most eminent Geologists and Mining Engineers in this country, recently made a thorough examination of this company's property, and in his report to the Securities Committee of the New York Mining Stock Exchange on the 10th of July, 1879, says:

"In this mine is a large supply of gold-bearing quartz equal in richness to the world-renowned 'Black Hills,' or the average value per ton of the gold mines of California and Australia. There is $60,000, NET, of free-milling ore in sight."

HON. GEORGE W. EMERY, GOVERNOR OF UTAH, in a letter dated May 7th, 1879, expresses his opinion as to the value of Prof. Clayton's judgment on mines as follows: "I have formed my opinion more from what I have heard Prof. Clayton say about it (the ——— Mine) than from any information or knowledge of my own. I regard Prof. Clayton the prince of experts, and a man on whose judgment I more fully rely than on that of any other living man in matters of that kind."

DR. HERMAN CREDNER, now Professor in the Royal Saxon Geological School at Leipzig, Germany, and one of the most eminent authorities extant, in a report upon this mine, made in 1865, and after **over $190,000** had been extracted therefrom by the imperfect appliances of those days, says:

"I predict for this mine great success under skillful and economical management."

Dr. Credner says, with reference to the previous operations of this mine, "For an average outlay of $25 in wages, the minimum yield was 13 ounces in gold, but ofttimes it was 16 ounces for the wages outlay noted."

DR. R. W. RAYMOND, U. S. Commissioner of Mining Statistics for eight years, indorses Dr. Credner very highly, and in referring to the above report, recently, says *that "he was perfectly competent and perfectly honest, and his estimates of cost and profits are undoubtedly careful and conscientious."* Dr. Raymond further observes, in his remarks upon the above report: "*When the mining industry of Virginia shall have been reorganized on a more rational plan, we believe it will enter upon a new era of growth and prosperity.*"

Subscription books were opened on July 30th for 50.000 shares of the above stock (out of the 100,000 shares in the Treasury) at 25c. per share, the proceeds to be devoted to the immediate purchase and erection of a first-class stamp-mill; over 25,000 shares have thus far been taken. There are three parallel veins on the property, which show an aggregate length of 15,000 feet of ore, averaging 2 feet thick. The company already has 8 buildings on property, including mill-house, shaft-house, and miners' dwellings. The Company owns also 40 acres of mineral land in fee simple, and the perpetual mineral right in 300 acres adjoining.

There are four years' dividends, of two per cent per month, on the present subscription price of the stock IN SIGHT.

Applications for the remainder of the first allotment and for prospectus, etc., may be made to

JOHN A. MACPHERSON, Secretary.

FINANCIAL.

VAN DEVENTER & PATTON,
Successors to Ludlow Patton & Co.,
Bankers and Brokers,
NO. 6 WALL STREET, NEW YORK.
C. H. Van Deventer. William Ludlow Patton.
Stocks, Bonds, Gold and Government Securities Bought and Sold on Commission. Loans negotiated. Interest allowed on deposits. Dividends and Interest Warrants collected and remitted.

W. W. HANLY & CO., BANKERS AND BROKERS, 60 Broadway, New York,
Buy and sell mining stocks on commission on New York Mining Stock Exchange, and offer superior facilities on San Francisco Exchanges through agency of the Bank of California.

B. B. MINOR. J. M. HARPER.
MINOR & HARPER,
DEALERS AND BROKERS IN
MINING SHARES AND MINING PROPERTIES
Special attention given to the Stocks of the BODIE AND BLACK HILLS DISTRICTS.
Office, No. 43 Exchange Place, New York.
Care Dickinson Bros., Bankers.
Circulars sent on application, showing operation in Bodie and Black Hill Stocks.

Parker Handy. — J. S. Cronise.
HANDY & CRONISE,
BANKERS,
AND DEALERS IN
Bullion and Specie,
24 NASSAU ST., NEW YORK.
Dealing exclusively in
GOLD AND SILVER BULLION AND COINS
of all kinds, we are prepared to guarantee satisfaction to those who may intrust their business to us.
We will make special arrangements with BANKERS and others dealing in GOLD DUST or in GOLD OR SILVER BARS, and will pay over to their correspondents here, as we may be directed, advances on Bullion when received or when the proceeds are ascertained.
We refer to:
American Exchange N. Bank, The Third National Bank,
Winslow, Lanier & Co., Eugene Kelly & Co.,
Eugene S. Ballin & Co.

$10 to $1000 invested in Wall Street Stocks makes fortunes every month. Book sent free explaining every thing.
Address BAXTER & CO., Bankers, 17 Wall St., N. Y.

PRESCOTT MINING COMPANY,
Incorporated under the laws of the State of New York.
CAPITAL STOCK, - $2,000,000
200,000 Shares, $10 each.
EDWIN A. HOPKINS, President. TOWNSEND COX, Vice-President.
LUCIUS L. SPRING, Treasurer. SAMUEL M. CHAPMAN, Secretary.
UNION TRUST COMPANY OF NEW YORK,
Registrar of Transfers.
Office, 35 Broadway, New York.
The Mining Properties of this Company are located in Yavapai County, Arizona, and consist of six mines, covering 9100 feet of ground, or more than one mile and a half in length, together with two Quartz Mills and the mill sites on which they stand.
Some of the ores yield, by official assay, as high as SEVENTEEN THOUSAND DOLLARS PER TON in gold and silver bullion, but the great body of the ores averages ninety dollars per ton.
The estimates show that 17,500 tons of ore are now in sight, which, at ninety dollars per ton, will yield one million five hundred and seventy-five thousand dollars in gold and silver bullion.
As soon as the contemplated additions and improvements in the reduction works are completed, the company will be able to commence and continue the shipment of four to five thousand dollars in bullion per day.
A limited amount of the full-paid stock of the company for sale by
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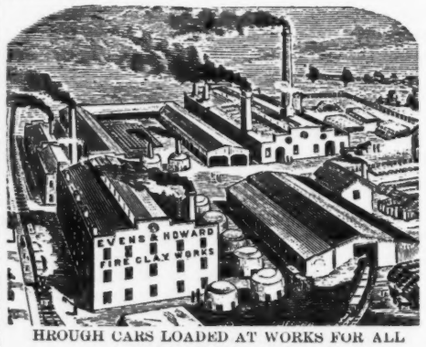

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